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THE

PHILOSOPHY

OF

SLEEP.

BY

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of Physicians and Surgeons of Glasgow.*

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THE HISTORY

OF THE

ROYAL

ACADEMY



TO

JOHN K. MACNISH, Esq.

LATE PRESIDENT OF THE FACULTY OF PHYSICIANS AND
SURGEONS OF GLASGOW.

THIS WORK

IS AFFECTIONATELY INSCRIBED

BY HIS SON,

THE AUTHOR.

TO THE
JOHN X. MARRIAGE

The present
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PREFACE
TO THE SECOND EDITION

THE present edition of *THE PHILOSOPHY OF SLEEP* is so different from its predecessor, that it may almost be regarded as a new treatise. The work has been, in a great measure, rewritten, the arrangement altered, and a great accession made to the number of facts and cases: the latter, many of which are now published for the first time, will, I hope, add much to its value. Some of them have occurred in my own practice; and for others, I am indebted to the kindness of several in-

genious friends. Notwithstanding every care, the work is far from being what it ought to be, and what I could have wished; but, imperfect as it is, it may, perhaps, stimulate some other inquirer to investigate the subject more deeply, and thus give rise to an abler disquisition. So far as I know, this is the only treatise in which an attempt is made to give a complete account of Sleep. The subject is not an easy one; and, in the present state of our knowledge, moderate success is probably all that can be looked for.

In the first edition, Dr Gall's theory, that the brain is composed of a plurality of organs, each organ being the seat of a particular mental faculty, was had recourse to for the purpose of explaining the different phenomena of Sleep; in the present Edition, this doctrine

is more prominently brought forward. The great objection to the prevailing metaphysical systems is, that none of their positions can be proved; and that scarcely two writers agree upon any particular point. The disciples of Gall, on the other hand, assume that his system having ascertainable facts to illustrate it, is at all times susceptible of demonstration—that nothing is taken for granted; and that the inquirer has only to make an appeal to nature to ascertain its fallacy or its truth. The science is entirely one of observation: by that it must stand or fall, and by that alone ought it to be tested. The phrenological system appears to me the only one capable of affording a rational and easy explanation of the phenomena of mind. It is impossible to account for dreaming, idiocy, spectral illusions, monomania, and partial genius in any other way.

For these reasons, and for the much stronger one, that having studied the science for several years with a mind rather hostile than otherwise to its doctrines, and found that nature invariably vindicated their truth, I could come to no other conclusion than that of adopting them as a matter of belief, and employing them for the explanation of phenomena which they alone seem calculated to elucidate satisfactorily. The system of Gall is gaining ground rapidly among scientific men, both in Europe and America. Some of the ablest physiologists in both quarters of the globe have admitted its accordance with nature; and, at this moment, it boasts a greater number of proselytes than at any previous period of its career. The prejudices still existing against it, result from ignorance of its real character. As people get

better acquainted with the science, and the formidable evidence by which it is supported, they will think differently.

Many persons who deny the possibility of estimating individual character, with any thing like accuracy, by the shape of the head, admit the great phrenological principle that the brain is composed of a plurality of organs. To them, as well as to those who go a step farther, the doctrine laid down in the present work will appear satisfactory. An admission that the brain is the material apparatus by which the mind manifests itself, and that each mental faculty is displayed through the medium of a particular part of the brain, is all that is demanded in considering the philosophy of the science. These points are only to be ascertained by an appeal to nature. No

man can wisely reject phrenology without making such an appeal.

A chapter on Spectral Illusions is now added, that subject having been unaccountably overlooked in the first Edition.

ADVERTISEMENT

TO THE THIRD EDITION.

THE present Edition will, I trust, be found an improvement upon the previous one. In consequence of the correction of a number of errors, which it is difficult to avoid even in the most carefully elaborated works, it lays claim to greater accuracy, and has, besides, the advantage of containing a variety of new illustrations, which it is hoped will elucidate the subject more clearly. The work now contains as good an account of Sleep as I am

capable of producing; and it is not probable that any change whatever will be made in future editions, supposing it is fortunate enough to pass through them.

R. M.

24th January, 1836.

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CHAPTER I.

INTRODUCTION.

SLEEP is the intermediate state between wakefulness and death: wakefulness being regarded as the active state of all the animal and intellectual functions, and death as that of their total suspension.

Sleep exists in two states; in the complete and incomplete. The former is characterized by a torpor of the various organs which compose the brain, and by that of the external senses and voluntary motion. Incomplete sleep, or dreaming, is the active state of one or more of the cerebral organs, while the remainder are in repose: the senses and the volition being either suspended or in action according to the circumstances of the case.

Complete sleep is a temporary metaphysical death, though not an organic one—the heart and lungs performing their offices with their accustomed regularity under the control of the involuntary muscles.

Sleep is variously modified, as we shall fully explain hereafter, by health and disease. The sleep of health is full of tranquillity. In such a state we remain for hours at a time in unbroken repose, nature banqueting on its sweets, renewing its lost energies, and laying in a fresh store for the succeeding day. This accomplished, slumber vanishes like a vapour before the rising sun; languor has been succeeded by strength; and all the faculties, mental and corporeal, are recruited. In this delightful state, man assimilates most with that in which Adam sprang from his Creator's hands, fresh, buoyant, and vigorous; rejoicing as a racer to run his course, with all his appetencies of enjoyment on edge, and all his feelings and faculties prepared for exertion.

Reverse the picture, and we have the sleep of disease. It is short, feverish, and unrefreshing, disturbed by frightful or melancholy

dreams. The pulse is agitated, and, from nervous excitation, there are frequent startings and twitchings of the muscles. Night-mare presses like an incarnation of misery upon the frame—imagination, distempered by its connexion with physical disorder, ranging along the gloomy confines of terror, holding communication with hell and the grave, and throwing a discolouring shade over human life.

Night is the time for sleep; and assuredly the hush of darkness as naturally courts to repose as meridian splendour flashes on us the necessity of our being up at our labour. In fact, there exists a strange, but certain sympathy between the periods of day and night and the performance of particular functions during these periods. That this is not the mere effect of custom, might be readily demonstrated. All nature awakes with the rising sun. The birds begin to sing; the bees to fly about with murmurous delight. The flowers which shut under the embrace of darkness, unfold themselves to the light. The cattle arise to crop the dewy herbage; and “man goeth forth to his labour until the evening.” At close of day, the re-

verse of all this activity and motion is observed. The songs of the woodland choir, one after another, become hushed, till at length twilight is left to silence, with her own star and her fallen dews. Action is succeeded by listlessness, energy by languor, the desire of exertion by the inclination for repose. Sleep, which shuns the light, embraces darkness, and they lie down together under the sceptre of midnight.

From the position of man in society, toil or employment of some kind or other is an almost necessary concomitant of his nature—being essential to healthy sleep, and consequently to the renovation of our bodily organs and mental faculties. But as no general rule can be laid down as to the quality and quantity of labour best adapted to particular temperaments, so neither can it be positively said how many hours of sleep are necessary for the animal frame. When the body is in a state of increase, as in the advance from infancy to boyhood, so much sleep is required, that the greater portion of existence may be fairly to be absorbed in this way. It is not

mere repose from action that is capable of recruiting the wasted powers, or restoring the nervous energy. Along with this is required that oblivion of feeling and imagination which is essential to, and which in a great measure constitutes, sleep. But if in mature years the body is adding to its bulk by the accumulation of adipose matter, a greater tendency to somnolency occurs than when the powers of the absorbents and exhalents are so balanced, as to prevent such accession of bulk. It is during the complete equipoise of these animal functions that health is enjoyed in greatest perfection; for such a state presupposes exercise, temperance, and a tone of the stomach quite equal to the process of digestion.

Sleep and stupor have been frequently treated of by physiological writers as if the two states were synonymous. This is not the case. In both there is insensibility; but it is easy to awake the person from sleep, and difficult, if not impossible, to arouse him from stupor. The former is a necessary law of the animal economy; the latter is the result of diseased action.

Birth and death are the Alpha and Omega of existence; and life, to use the language of Shakspeare, "is rounded by a sleep."

When we contemplate the human frame in a state of vigour, an impression is made on the mind that it is calculated to last for ever. One set of organs is laying down particles, and another taking them up with such exquisite nicety, that for the continual momentary waste there is continual momentary repair; and this is capable of going on with the strictest equality for half-a-century.

What is life? Those bodies are called living in which an appropriation of foreign matter is going on; death is where this process is at an end. When we find blood in motion, the process of appropriation is going on. The circulation is the surest sign of life. Muscles retain irritability for an hour or two after circulation ceases, but irritability is not life. Death is owing to the absence of this process of appropriation.

Bichat has divided life into two varieties, the *organic* and the *animal*. The first is common to both vegetables and animals; the

last is peculiar to animals alone. Organic life applies to the functions which nourish and sustain the object—animal life to those which make it a sentient being; which give it thought, feeling, and motion, and bring it into communication with the surrounding world. The processes of assimilation and excretion exist both in animals and vegetables: the other vital processes are restricted solely to animals. The digestive organs, the kidneys, the heart, and the lungs, are the apparatus which carry into effect the organic life of animals. Those which manifest animal life are the brain, the organs of the senses, and the voluntary powers. Sleep is the suspension of animal life; and during its continuance the creature is under the influence of organic life alone.

Notwithstanding the renovating influence of sleep, which apparently brings up the lost vigour of the frame to a particular standard, there is a power in animal life which leads it almost imperceptibly on from infancy to second childhood, or that of old age. This power sleep, however healthy, is incapable of counteracting. The skin wrinkles, and every-

where shows marks of the ploughshare of Saturn; the adipose structure dissolves; the bones become brittle; the teeth decay or drop out; the eye loses its exquisite sensibility to sight; the ear to sound; and the hair is bleached to whiteness. These are accompanied with a general decay of the intellectual faculties; there is a loss of memory, and less sensibility to emotion; the iris hues of fancy subside to twilight; and the sphere of thought and action is narrowed. The principle of decay is implanted in our nature, and cannot be counteracted. Few people, however, die of mere decay, for death is generally accelerated by disease. From sleep we awake to exertion—from death not at all, at least on this side of time. Methuselah in ancient, and Thomas Parr in modern times ate well, digested well, and slept well; but at length they each died. Death is omnivorous. The worm which crawls on the highway and the monarch on his couch of state, are alike subjected to the same stern and inexorable law; they alike become the victims of the universal tyrant.

CHAPTER II.

SLEEP IN GENERAL.

EVERY animal passes some portion of its time in sleep. This is a rule to which there is no exception; although the kind of slumber and the degree of profoundness in which it exists in the different classes are extremely various. Some physiologists lay it down as a general rule, that the larger the brain of an animal the greater is the necessity for a considerable proportion of sleep. This, however, I suspect is not borne out by facts. Man, for instance, and some birds, such as the sparrow, have the largest brains in proportion to their size, and yet it is probable that they do not sleep so much as some other animals with much smaller brains. The serpent tribe, unless when sti.

mulated by hunger, (in which case they will remain awake for days at a time waiting for their prey,) sleep much more than men or birds, and yet their brains are, proportionally, greatly inferior in size: the boa, after dining on a stag or goat, will continue in profound sleep for several days. Fishes,* indeed whose brains are small, require little sleep; but the same remark applies to birds,† which have large brains, and whose slumber is neither profound nor of long continuance. The assertion, therefore, that the quantum of sleep

* As a proof that fishes sleep, Aristotle, who seems to have paid more attention to their habits than any modern author, states that while in this condition they remain motionless, with the exception of a gentle movement of the tail—that they may then be readily taken by the hand, and that, if suddenly touched, they instantly start. The tunny, he adds, are surprised and surrounded by nets while asleep, which is known by their showing the white of their eyes.

† The sleep of some birds is amazingly light. Such is the case with the goose, which is disturbed by the slightest noise, and more useful than any watch-dog for giving warning of danger. It was the cackling of the sacred geese that saved the capitol of Rome from the soldiers of Brennus, when the watch-dogs failed to discover the approach of the enemy.

has any reference to the size of the brain may be safely looked upon as unfounded. That it has reference to the quality of the brain is more likely, for we find that carnivorous animals sleep more than such as are herbivorous; and it is probable that the texture, as well as form, of the brains of these two classes is materially different. This remark, with regard to the causes of the various proportions of sleep required by the carnivorous and herbivorous tribes, I throw out not as a matter of certainty, but merely as a surmise which seems to have considerable foundation in truth.

In proportion as man exceeds all other animals in the excellency of his physical organization, and in intellectual capability, we shall find that in him the various phenomena of sleep are exhibited in greater regularity and perfection. Sleep seems more indispensably requisite to man than to any other creature, if there can be supposed to exist any difference where its indispensability is universal, and where every animal must, in some degree or other, partake of it; but, as regards man, it is certain that he sustains any violation of the

law ordaining regular periods of repose with less indifference than the lower grades of creation—that a certain proportion of sleep is more essential to his existence than theirs—that he has less power of enduring protracted wakefulness, or continuing in protracted sleep—and that he is more refreshed by repose and more exhausted by the want of it than they. The sleep of man, therefore, becomes a subject of deeper interest and curiosity than that of any other animal, both on account of the more diversified manner in which it displays itself, and the superior opportunity which exists of ascertaining the various phenomena, which in the inferior animals can only be conjectured or darkly guessed at.

Sleep, being a natural process, takes place in general without any very apparent cause. It becomes, as it were, a habit, into which we insensibly fall at stated periods, as we fall into other natural or acquired habits. But it differs from the latter in this, that it cannot in any case be entirely dispensed with, although by custom we may bring ourselves to do with a much smaller portion than we are usually

in the practice of indulging in. In this respect, it bears a strong analogy to the appetite for food or drink. It has a natural tendency to recur every twenty-four hours, and the periods of its accession coincide with the return of night.

But though sleep becomes a habit into which we would naturally drop without any obvious, or very easily discovered cause, still we can often trace the origin of our slumbers; and we are all acquainted with many circumstances which either produce or heighten them. I shall mention a few of these causes.

Heat has a strong tendency to produce sleep. We often witness this in the summer season, sometimes in the open air, but more frequently at home, and, above all, in a crowded meeting. In the latter case, the soporific tendency is greatly increased by the impurity of the air. A vitiated atmosphere is strongly narcotic, and, when combined with heat and monotony, is apt to induce slumber, not less remarkable for the rapidity of its accession than its overpowering character. In such a situation, the mind in a few minutes ceases to act, and sinks

into a state of overpowering oblivion. The slumber, however, not being a natural one, and seldom occurring at the usual period, is generally short: it rarely exceeds an hour; and when the person awakes from it, so far from being refreshed, he is usually dull, thirsty, and feverish, and finds more than common difficulty in getting his mental powers into their usual state of activity.

A heated church and a dull sermon are almost sure to provoke sleep. There are few men whose powers are equal to the task of opposing the joint operation of two such potent influences. They act on the spirit like narcotics, and the person seems as if involved in a cloud of aconite or belladonna. The heat of the church might be resisted, but the sermon is irresistible. Its monotony falls in leaden accents upon the ear, and soon subdues the most powerful attention. Variety, whether of sight or sound, prevents sleep, while monotony of all kinds is apt to induce it. The murmuring of a river, the sound of the Eolian harp, the echo of a distant cascade, the ticking of a clock, the hum of bees under a burning

sun, and the pealing of a remote bell, all exercise the same influence. So conscious was Boerhaave of the power of monotony, that in order to procure sleep for a patient, he directed water to be placed in such a situation as to drop continually on a brass pan. When there is no excitement, sleep is sure to follow. We are all kept awake by some mental or bodily stimulus, and when that is removed our wakefulness is at an end. Want of stimulus, especially in a heated atmosphere, produces powerful effects; but where sufficient stimulus exists, we overcome the effects of the heat, and keep awake in spite of it. Thus, in a crowded church, where a dull, inanimate preacher would throw the congregation into a deep slumber, such a man as Massillon, or Chalmers, would keep them in a state of keen excitement. He would arrest their attention, and counteract whatever tendency to sleep would otherwise have existed. In like manner, a prosing monotonous, long-winded acquaintance is apt to make us dose, while another of a lively, energetic conversation keeps us brisk and awake. It will generally be found that the

reasoning faculties are those which are soonest prostrated by slumber, and the imaginative the least so. A person would more readily fall asleep if listening to a profound piece of argumentation, than to a humorous or fanciful story; and probably more have slumbered over the pages of Bacon and Locke, than over those of Shakspeare and Milton.

Cold produces sleep as well as heat, but to do so a very low temperature is necessary, particularly with regard to the human race; for, when cold is not excessive, it prevents instead of occasioning slumber: in illustration of which, I may mention the case of several unfortunate women, who lived thirty-four days in a small room overwhelmed with the snow, and who scarcely slept during the whole of that period. In very northern and southern latitudes, persons often lose their lives by lying down in a state of drowsiness occasioned by intense cold. The winter sleep or hibernation of animals arises from cold; but as this species of slumber is of a very peculiar description, I have discussed it separately in another part of the work.

The finished gratification of all ardent desires has the effect of inducing slumber: hence, after any keen excitement, the mind becomes exhausted, and speedily relapses into this state. Attention to a single sensation has the same effect. This has been exemplified in the case of all kinds of monotony, where there is a want of variety to stimulate the ideas, and keep them on the alert. "If the mind," says Cullen, "is attached to a single sensation, it is brought very nearly to the state of the total absence of impression;" or, in other words, to the state most closely bordering upon sleep. Remove those stimuli which keep it employed, and sleep ensues at any time.

Any thing which mechanically determines the blood to the brain, acts in a similar manner, such as whirling round for a great length of time, ascending a lofty mountain, or swinging to and fro. The first and last of these actions give rise to much giddiness, followed by intense slumber, and at last by death, if they be continued very long. By lying flat upon a millstone while performing its evolutions, sleep is soon produced, and death, with-

out pain, would be the result, if the experiment were greatly protracted. Apoplexy, which consists of a turgid state of the cerebral vessels, produces perhaps the most complete sleep that is known, in so far that, while it continues, it is utterly impossible to waken the individual: no stimulus, however powerful, has any influence in arousing his dormant faculties. When the circulating mass in the brain is diminished beyond a certain extent, it has the same effect as the opposite state; whence excessive loss of blood excites sleep.

Opium, hyoscyamus, aconite, belladonna, and the whole tribe of narcotics, induce sleep, by a specific power which they exert upon the brain, through the medium of the nerves of the stomach, and sometimes by inducing an apoplectic state. The former effect is occasioned by a moderate—the latter by an over dose.

A heavy meal, especially if the stomach is at the same time weak, is apt to induce sleep. In ordinary circumstances, the nervous energy or sensorial power of this viscus is sufficient

to carry on its functions, but when an excess of food is thrown upon it, it is then unable to furnish, from its own resources, the powers requisite for digestion. In such a case it draws upon the whole body—upon the chest, the limbs, &c., from whence it is supplied with the sensorial power of which it is deficient; and is thus enabled to perform that which by its own unassisted means it never could have accomplished. But mark the consequences of such accommodation! Those parts, by communicating vigour to the stomach, become themselves debilitated in a corresponding ratio, and get into a state analogous to that from which they had extricated this viscus. The extremities become cold, the respiration heavy and stertorous, and the brain torpid. In consequence of the torpor of the brain, sleep ensues. It had parted with that portion of sensorial energy which kept it awake, and by supplying another organ is itself thrown into the state of sleep. It is a curious fact, that the feeling of sleep is most strong while the food remains on the stomach, shortly after the accession of the digestive process, and be-

fore that operation which converts the nourishment into chyle has taken place.*

When, therefore, the sensorial power is sufficiently exhausted, we naturally fall asleep. As this exhaustion, however, is a gradual process, so is that of slumber. Previous to its accession, a feeling of universal lassitude prevails, and exhibits itself in yawning,† peevishness, heaviness, and weakness of the eyes; indifference to surrounding objects, and all the

* Mr A. Carmichael, of Dublin, supposes that the process of assimilation in the brain is the proximate cause of sleep. For an exposition of his views, which are both novel and ingenious, see his *Memoir of Spurzheim*; and also the 42d and 44th Nos. of the *Phrenological Journal*.

† We yawn before falling asleep and when we awake; yawning, therefore, precedes and follows sleep. It seems an effort of nature to restore the just equilibrium between the flexor and extensor muscles. The former have a natural predomiancy in the system; and on their being fatigued, we, by an effort of the will, or rather by a species of instinct, put the latter into action for the purpose of redressing the balance, and poising the respective muscular powers. We do the same thing on awaking, or even on getting up from a recumbent posture—the flexors in such circumstances having prevailed over the extensors, which were in a great measure inert.

characteristics of fatigue. If the person be seated, his head nods and droops: the muscles become relaxed; and, when circumstances admit of it, the limbs are thrown into the recumbent position, or that most favourable for complete inaction. The senses then become unconscious of impressions, and, one after the other, part with sensation: the sight first, then taste, smell, hearing, and touch, all in regular order. The brain does not all at once glide into repose: its different organs being successively thrown into this state; one dropping asleep, then another, then a third, till the whole are locked up in the fetters of slumber. This gradual process of intellectual obliteration is a sort of confused dream—a mild delirium which always precedes sleep. The ideas have no resting-place, but float about in the confused tabernacle of the mind, giving rise to images of the most perplexing description. In this state they continue for some time, until, as sleep becomes more profound, the brain is left to thorough repose, and they disappear altogether.

Sleep produces rather important changes in

the system. The rapidity of the circulation is diminished, and, as a natural consequence, that of respiration; the force of neither function, however, is impaired; but, on the contrary, rather increased. Vascular action is diminished in the brain and organs of volition, while digestion and absorption all proceed with increased energy. The truth of most of these propositions it is not difficult to establish.

The diminished quickness of the circulation is shown in the pulse, which is slower and fuller than in the waking state; that of respiration in the more deliberate breathing which accompanies sleep. Diminished action of the brain is evident from the abolition of its functions, as well as direct evidence.* A case is related by Blumenbach, of a person who had been trepanned, and whose brain was observed to sink when he was asleep, and swell out when he was awake. As for the lessened vascular action in the voluntary powers, this is rendered obvious by the lower temperature

* Too much sleep, however, is accompanied with venous congestion in the brain, as is manifest from the headach which we experience on awaking.

on the surface which takes place during the slumbering state. Moreover, in low typhus, cynanche maligna, and other affections attended with a putrid diathesis, the petechiæ usually appear during sleep when the general circulation is least vigorous, while the paroxysms of reaction or delirium take place, for the most part, in the morning when it is in greater strength and activity.

In some individuals the stronger and more laborious respiration of sleep is made manifest by that stertorous sound commonly denominated snoring. Stout apoplectic people—those who snuff much or sleep with their mouths open, are most given to this habit. It seems to arise principally from the force with which the air is drawn into the lungs in sleep. The respiratory muscles being less easily excited during this state do not act so readily, and the air is consequently admitted into the chest with some degree of effort. This, combined with the relaxed state of the fauces, gives rise to the stertorous noise. Snuffing, by obstructing the nasal passages, and thus rendering breathing more difficult, has the same effect; conse-

quently snuffers are very often great snorers. The less rapidly the blood is propelled through the lungs, the slower is the respiration, and the louder the stertor becomes. Apoplexy, by impairing the sensibility of the respiratory organs, and thus reducing the frequency of breathing, produces snoring to a great extent; and all cerebral congestions have, to a greater or lesser degree, the same effect.

That sleep increases absorption is shown in the disappearance or diminution of many swellings, especially œdema of the extremities, which often disappears in the night, and recurs in the daytime, even when the patient keeps his bed, a proof that its disappearance does not always depend on the position of the body: that it increases digestion, and, as a natural consequence, nutrition, is rendered probable by many circumstances: hence it is the period in which the regeneration of the body chiefly takes place. Were there even no augmentation given to the assimilative function, as is maintained by Broussais and some other physiologists, it is clear that the body would be more thoroughly nourished than when

awake, for all those actions which exhaust it in the latter condition are quiescent, and it remains in a state of rest, silently accumulating power without expending any.

Sleep lessens all the secretions, with one exception—that of the skin. The urinary, salivary, and bronchial discharges, the secretions from the nose, eyes, and ears, are all forced less copiously than in the waking state. The same rule holds with regard to other secretions—hence diarrhœa, menorrhagia, &c., are checked during the interval of slumber.

From the diminished vascular action going on upon the surface we would be apt to expect a decrease of perspiration, but the reverse is the case. Sleep relaxes the cutaneous vessels, and they secrete more copiously than in the waking state. According to Sanctorius, a person sleeping some hours undisturbed will perspire insensibly twice as much as one awake. This tendency of sleep to produce perspiration is strikingly exhibited in diseases of debility; whence the nocturnal sweats so prevailing and so destructive in all cachectic affections. Sanctorius farther states, that the insensible

perspiration is not only more abundant, but less acrimonious during sleep than in the waking state; that, if diminished during the day, the succeeding sleep is disturbed and broken, and that the diminution, in consequence of too short a sleep, disposes to fever, unless the equilibrium is established on the following day by a more copious perspiration.

Sleep produces peculiar effects upon the organs of vision. *A priori*, we might expect that, during this state, the pupil would be largely dilated in consequence of the light being shut out. On opening the eyelids cautiously it is seen to be contracted; it then quivers with an irregular motion as if disposed to dilate, but at length ceases to move, and remains in a contracted state till the person awakes. This fact I have often verified by inspecting the eyes of children. Sleep also communicates to these organs a great accession of sensibility, so much so, that they are extremely dazzled by a clear light. This, it is true, happens on coming out of a dark into a light room, or opening our eyes upon the sunshine even when we are awake, but the effect

is much stronger when we have previously been in deep slumber.

Sleep may be natural or diseased—the former arising from such causes as exhaust the sensorial power, such as fatigue, pain, or protracted anxiety of mind; the latter from cerebral congestion, such as apoplexy, or plethora. The great distinction between these varieties is, that the one can be broken by moderate stimuli, while the other requires either excessive stimuli or the removal of the particular cause which gave rise to it.

During complete sleep, no sensation whatever is experienced by the individual: he neither feels pain, hunger, thirst, nor the ordinary desires of nature. He may be awakened to a sense of such feelings, but during perfect repose he has no consciousness whatever of their existence—if they can indeed be said to exist where they are not felt. For the same reason, we may touch him without his feeling it; neither is he sensible to sounds, to light, or to odours. When, however, the slumber is not very profound, he may hear music or conversation, and have a sense of pain, hunger,

and thirst; and, although not awakened by such circumstances, may recollect them afterwards. These impressions, caught by the senses, often give rise to the most extraordinary mental combinations, and form the groundwork of the most elaborate dreams.

I am of opinion that we rarely pass the whole of any one night in a state of perfect slumber. My reason for this supposition is, that we very seldom remain during the whole of that period in the position in which we fall asleep. This change of posture must have been occasioned by some emotion, however obscure, affecting the mind, and through it the organs of volition, whereas in complete sleep we experience no emotion whatever.

The position usually assumed in sleep has been mentioned; but sleep may ensue in any posture of the body: persons fall asleep on horseback, and continue riding in this state for a long time without being awakened. Horses sometimes sleep for hours in the standing posture; and the circumstance of somnambulism shows that the same thing may occur in the human race

Some animals, such as the hare, sleep with their eyes open; and I have known similar instances in the human subject. But the organ is dead to the ordinary stimulus of light, and sees no more than if completely shut.

Animals which prey by night, such as the cat, hyena, &c., pass the greater part of their time in sleep; while those that do not, continue longer awake than asleep. The latter slumber part of the night and continue awake so long as the sun continues above the horizon. The propensity of the former to sleep in the daytime seems to proceed from the structure of their eyes; as they see better in moderate darkness than in a clear light, and consequently pass in slumber that period in which their vision is of least avail to them. It is a very curious fact, however, that these animals, when kept in captivity, reverse the order of their nature, and remain awake by day while they sleep by night. This fact has been ascertained in the menagerie at Paris. In such cases I apprehend that some corresponding change must take place in the structure of the eyes,

assimilating them to those of animals which naturally sleep by night.

M. Castel observes,* that the greater part of animals sleep longer in winter than in summer. It is precisely on account of perspiration that in the first of these seasons sleep is more necessary than in the second. In winter, the want of perspiration during day is furnished in sleep; in summer, the diurnal sweat supplies that of the night, and renders much sleep less necessary. In other words, during summer the perspiration is so much excited by atmospheric temperature, that a shorter time is sufficient to give issue to the fluids which have to be expelled by this means. For the same reason, the inhabitants of very cold climates sleep more than those who live in the warmer latitudes.

The profoundness of sleep differs greatly in different individuals. The repose of some is extremely deep; that of others quite the reverse. One will scarcely obey the roar of a cannon; another will start at the chirping of

* "Journal Complémentaire."

a cricket or the faintest dazzling of the moon-beams. Heavy-minded, phlegmatic people generally belong to the former class: the irritable, the nervous, and the hypochondriac to the latter, although we shall at times find the cases reversed with regard to the nature of sleep enjoyed by these different temperaments. Man is almost the only animal in whom much variety is to be found in this respect. The lower grades are distinguished by a certain character, so far as their slumber is concerned, and this character runs through the whole race: thus, all hares, cats, &c., are light sleepers; all bears, turtles, badgers, &c., are the reverse. In man, the varieties are infinite. Much of this depends upon the age and temperament of the individual, and much upon custom.

The profoundness of sleep differs also during the same night. For the first four or five hours, the slumber is much heavier than towards morning. The cause of such difference is obvious; for we go to bed exhausted by previous fatigue, and consequently enjoy sound repose, but in the course of a few hours, the

necessity for this gradually abates, and the slumber naturally becomes lighter.

That sleep from which we are easily roused is the healthiest: very profound slumber partakes of the nature of apoplexy.

On being suddenly awakened from a profound sleep our ideas are exceedingly confused; and it is some time before we can be made to comprehend what is said to us. For some moments we neither see, nor hear, nor think with our usual distinctness, and are in fact, in a state of temporary reverie.

When there is a necessity for our getting up at a certain hour, the anxiety of mind thus produced not only prevents the sleep from being very profound, but retards its accession; and even after it does take place, we very seldom oversleep ourselves, and are always sure to be awake at, or before the stipulated time.

Shortly after falling asleep, we often awake with a sudden start, having the mind filled with painful impressions; although we often find it impossible to say to what subject they refer. Some persons do this regularly every night, and there can be no doubt that it pro-

ceeds from the mind being tortured by some distressing vision; which, however, has faded away without leaving behind it any feeling, save that of undefinable melancholy. There are some persons who are sure to be aroused in this startling and painful manner if they happen to fall asleep in the position in which they at first lay down, who nevertheless escape if they turn themselves once or twice before falling into repose. This fact we must take as we find it: any explanation as to its proximate cause seems quite impracticable.

Disease exercises a powerful influence upon sleep. All affections attended with acute pain prevent it, in consequence of the violent excitement of the nervous system. This is especially the case where there is much *active* determination of blood to the head, as in phrenetic affections, and fevers in general.

Sleep is always much disturbed in hydrothorax; and almost every disease affects it more or less; some preventing it altogether, some limiting the natural proportion, some inducing fearful dreams, and all acting with a power proportioned to the direct or indirect influ-

ence which they exercise upon the sensorium.

During sleep the system is peculiarly apt to be acted upon by all external impressions, especially cold; and those who fall asleep exposed to a current of air are far more likely to feel the bad consequences thereof, than if they were broad awake. This may be accounted for from the fact that the brain being dormant, the system is ill supplied with nervous energy during sleep, and is consequently less able to resist cold than when the supply is energetic. During wakefulness, it is found that a depressed condition of the mind gives a susceptibility to suffer from external influences, such as cold, contagion, miasma, &c.; and this I explain by supposing that, under mental depression, the brain sends forth sensorial power deficient in quantity, or quality, or both. In the opposite states of drunkenness, or maniacal excitement, where the nervous energy is excessive, external influences are better withstood than at any other time.

Sleep is much modified by habit. Thus, an old artillery-man often enjoys tranquil repose,

while the cannon are thundering around him; an engineer has been known to fall asleep within a boiler, while his fellows were beating it on the outside with their ponderous hammers; and the repose of a miller is nowise incommoded by the noise of his mill. Sound ceases to be a stimulus to such men, and what would have proved an inexpressible annoyance to others, is by them altogether unheeded. It is common for carriers to sleep on horseback, and coachmen on their coaches. During the battle of the Nile, some boys were so exhausted, that they fell asleep on the deck amid the deafening thunder of that dreadful engagement. Nay, silence itself may become a stimulus, while sound ceases to be so. Thus, a miller being very ill, his mill was stopped that he might not be disturbed by its noise; but this, so far from inducing sleep, prevented it altogether; and it did not take place till the mill was set a-going again. For the same reason, the manager of some vast iron-works, who slept close to them amid the incessant din of hammers, forges, and blast furnaces, would awake if there was any cessation of the noise

during the night. To carry the illustration still farther, it has been noticed, that a person who falls asleep near a church, the bell of which is ringing, may hear the sound during the whole of his slumber, and be nevertheless aroused by its sudden cessation. Here the sleep must have been imperfect, otherwise he would have been insensible to the sound: the noise of the bell was no stimulus; it was its cessation which, by breaking the monotony, became so, and caused the sleeper to awake.

The effects of habit may be illustrated in various ways. "If a person, for instance, is accustomed to go to rest exactly at nine o'clock in the evening, and to rise again at six in the morning, though the time of going to sleep be occasionally protracted till twelve, he will yet awake at his usual hour of six; or, if his sleep be continued by darkness, quietude, or other causes, till the day be further advanced, the desire of sleep will return in the evening at nine."

Persons who are much in the habit of having their repose broken, seldom sleep either long or profoundly, however much they may be left

undisturbed. This is shown in the cases of soldiers and seamen, nurses, mothers, and keepers.

Seamen and soldiers on duty can, from habit, sleep when they will, and wake when they will. The Emperor Napoleon was a striking instance of this fact. Captain Barclay, when performing his extraordinary feat of walking a mile an hour for a thousand successive hours, obtained at last such a mastery over himself, that he fell asleep the instant he lay down. Some persons cannot sleep from home, or on a different bed from their usual one: some cannot sleep on a hard, others on a soft bed. A low pillow prevents sleep in some, a high one in others. The faculty of remaining asleep for a great length of time, is possessed by some individuals. Such was the case with Quin, the celebrated player, who could slumber for twenty-four hours successively—with Elizabeth Orvan, who spent three-fourths of her life in sleep—with Elizabeth Perkins, who slept for a week or a fortnight at a time—with Mary Lyall, who did the same for six successive weeks—and with many others, more or less

remarkable. In Bowyer's life of Beattie, a curious anecdote is related of Dr Reid, viz., that he could take as much food and immediately afterwards as much sleep as were sufficient for two days.

A phenomenon of opposite character is also sometimes observed, for there are individuals who can subsist upon a surprisingly small portion of sleep. The celebrated General Elliot was an instance of this kind: he never slept more than four hours out of the twenty-four. In all other respects he was strikingly abstinent: his food consisting wholly of bread, water, and vegetables. In a letter communicated to Sir John Sinclair, by John Gordon, Esq. of Swiney, Caithness, mention is made of a person, named James Mackay, of Skerry, who died in Strathnaver in the year 1797, aged ninety-one: he only slept, on an average, four hours in the twenty-four, and was a remarkably robust and healthy man. Frederick the Great of Prussia, and the illustrious surgeon, John Hunter, only slept five hours in the same period; and the sleep of the active-minded is always much less than that of the listless and

indolent. The celebrated French General Fichegru informed Sir Gilbert Blane, that during a whole year's campaigns, he had not above one hour's sleep in the twenty-four. I know a lady who never sleeps above half-an-hour at a time, and the whole period of whose sleep does not exceed three or four hours in the twenty-four; and yet she is in the enjoyment of excellent health. Gooch gives an instance of a man, who slept only for fifteen minutes out of the twenty-four hours, and even this was only a kind of dozing, and not a perfect sleep: notwithstanding which he enjoyed good health, and reached his seventy-third year. I strongly suspect there must be some mistake in this case, for it is not conceivable that human nature could subsist upon such a limited portion of repose. Instances have been related of persons who *never slept*; but these must be regarded as purely fabulous.

The time of life modifies sleep materially. When a man is about his grand climacteric, or a few years beyond it, he slumbers less than at any former period; but very young children always sleep away the most of their time. At

this early age, the texture of the brain being imperfect and pulpy, the organ cannot work for a long time continuously, and requires greater relaxation or sleep than afterwards, when its firmness and consistency are increased. For the first two or three years children sleep more than once in the twenty-four hours. The state of the foetus has been denominated, by some writers, a continued sleep, but the propriety of this definition may be doubted; for the mind having never yet manifested itself, and the voluntary organs never having been exercised, can hardly be said to exist in slumber, a condition which supposes a previous waking state of the functions. Middle-aged persons who lead an active life, seldom sleep above eight or nine hours in the twenty-four, however much longer they may lie in bed; while a rich, lazy, and gormandizing citizen will sleep twelve or thirteen hours at a time.

Sleep is greatly modified in old people. They usually slumber little, and not at all profoundly. Sometimes, however, when they get into a state of dotage, in consequence of extreme old age, the phenomena of childhood once more appear,

and they pass the greater part of their time in sleep. The repose of the aged is most apt to take place immediately after taking food, while they often solicit it in vain at that period at which, during the former years of their lives, they had been accustomed to enjoy it. The celebrated De Moivre slept twenty hours out of the twenty-four, and Thomas Parr latterly slept away by far the greater part of his existence.

Those who eat heartily, and have strong digestive powers, usually sleep much. This takes place because the sensorial power is consumed by the stomach, to the starvation, as it were, of the brain, which is thus thrown into a state of sleep. The great portion of sleep required by infants is owing, in part, to the prodigious activity of their digestive powers. The majority of animals sleep after eating, and man has a strong tendency to do the same thing, especially when oppressed with heat. In the summer season, a strong inclination is often felt to sleep after dinner, when the weather is very warm.

A heavy meal, which produces no uneasy feeling while the person is awake, will often

do so if he fall asleep. According to Dr Darwin, this proceeds from the sensorial actions being increased, when the volition is suspended. The digestion from this circumstance goes on with increased rapidity. "Heat is produced in the system faster than it is expended; and, operating on the sensitive actions, carries them beyond the limitations of pleasure, producing, as is common in such cases, increased frequency of pulse." In this case, incomplete sleep is supposed, for, when the slumber is perfect, no sensation whatever, either painful or the reverse, can be experienced.

In recovering from long protracted illnesses, accompanied with great want of rest, we generally sleep much—far more, indeed, than during the most perfect health. This seems to be a provision of nature for restoring the vigour which had been lost during disease, and bringing back the body to its former state. So completely does this appear to be the case, that as soon as a thorough restoration to health takes place, the portion of sleep diminishes till it is brought to the standard at which it originally stood before the accession of illness.

After continuing a certain time asleep, we awake, stretch ourselves, open our eyes, rub them, and yawn several times. At the moment of awaking, there is some confusion of ideas, but this immediately wears away. The mental faculties from being in utter torpor, begin to act one after the other;* the senses do the same. At last, the mind, the senses, and the locomotion being completely restored, what are our sensations? Instead of the listlessness, lassitude, and general fatigue experienced on lying down, we feel vigorous and refreshed. The body is stronger, the thoughts clearer and more composed; we think coolly, clearly, rationally, and can often comprehend with ease what baffled us on the previous night.

* " In the gradual progress from intense sleep, when there can be no dream, to the moment of perfect vigilance, see what occurs. The first cerebral organ that awakes enters into the train of thinking connected with its faculty: some kind of DREAM is the result; as organ after organ awakes, the dream becomes more vivid; and as the number of active organs increases, so does the complication of dreams; and if all the internal organs are awake, the man is still asleep until his awaking senses bring him into direct communication with the world."

Carmichael's Memoir of Spurzheim, p. 92.

One or two other points remain to be noticed. On awaking the eyes are painfully affected by the light, but this shortly wears away, and we then feel them stronger than when we went to bed. The muscular power, also, for a few seconds, is affected. We totter when we get up; and if we lay hold of any thing, the hand lacks its wonted strength. This, however, as the current of nervous energy is restored throughout the muscles, immediately disappears; and we straightway possess redoubled vigour. On examining the urine, we find that it is higher in its colour than when we lay down. The saliva is more viscid, the phlegm harder and tougher, the eyes glutinous and the nostrils dry. If we betake ourselves to the scale, we find that our weight has diminished in consequence of the nocturnal perspirations; while, by subjecting our stature to measurement, we shall see that we are taller by nearly an inch than on the preceding night. This fact was correctly ascertained in a great variety of instances by Mr Wasse, Rector of Aynho in Northumberland; and is sufficiently accounted for by the

inter-vertebral cartilages recovering their elasticity, in consequence of the bodily weight being taken off them during the recumbent posture of sleep.

Such are the leading phenomena of sleep. With regard to the purposes which it serves in the economy, these are too obvious to require much detail. Its main object is to restore the strength expended during wakefulness; to recruit the body by promoting nutrition and giving rest to the muscles; and to renovate the mind by the repose which it affords the brain. Action is necessarily followed by exhaustion; sleep by checking the one restrains the other, and keeps the animal machine in due vigour. According to Richerand, one of the great purposes served by sleep, is to diminish the activity of the circulation, which a state of wakefulness has the invariable effect of increasing. "The exciting causes," he observes, "to which our organs are subject during the day, tend progressively to increase their action. The throbbings of the heart, for instance, are more frequent at night than in the morning; and this action gradually accelerated,

would soon be carried to such a degree of activity as to be inconsistent with life, if its velocity were not moderated at intervals by the recurrence of sleep."

To detail the beneficent purposes served by sleep in the cure of diseases, as well as in health, would be a work of supererogation. They are felt and recognised by mankind as so indispensable to strength, to happiness, and to life itself, that he who dispenses with that portion of repose required by the wants of nature, is in reality curtailing the duration of his own existence.

CHAPTER III.

DREAMING.

IN perfect sleep, as we have elsewhere stated, there is a quiescence of all the organs which compose the brain; but when in consequence of some inward excitement, one organ or more continues awake, while the remainder are in repose, a state of incomplete sleep is the result, and we have the phenomena of dreaming. If, for instance, any irritation, such as pain, fever, drunkenness, or a heavy meal, should throw the perceptive organs into a state of action while the reflecting ones continue asleep, we have a consciousness of objects, colours, or sounds being presented to us, just as if the former organs were actually stimulated by having such impressions communicated to them by

the external senses;* while, in consequence of the repose of the reflecting organs, we are unable to rectify the illusions, and conceive that the scenes passing before us, or the sounds that we hear, have a real existence. This want of mutual co-operation between the different organs of the brain accounts for the disjointed nature, the absurdities, and incoherencies of dreams.†

* This internal stimulation of particular organs without the concurrence of outward impressions by the senses, is more fully stated under the head of Spectral Illusions.

† Dr Pierquin reports the following case illustrative of the action of the brain during the performance of the mental functions. It fell under his notice in one of the hospitals of Montpellier, in the year 1821.—“ The subject of it was a female, at the age of twenty-six, who had lost a large portion of her scalp, skull-bone, and dura mater in a neglected attack of lues venera. A corresponding portion of her brain was consequently bare, and subject to inspection. When she was in a *dreamless sleep*, her brain was *motionless*, and *lay within* the cranium. When her sleep was *imperfect*, and she was agitated by dreams, her brain *moved* and *protruded* without the cranium, forming *cerebral hernia*. In *vivid* dreams, reported as such by herself, the protrusion was considerable, and when she was perfectly awake, especially if engaged in active thought, or sprightly con-

Many other doctrines have been started by philosophers, but I am not aware of any which can lay claim even to plausibility; some, indeed, are so chimerical, and so totally unsupported by evidence, that it is difficult to conceive how they ever entered into the imaginations of their founders. Baxter, for instance, in his "Treatise on the Immortality of the Soul," endeavours to show that dreams are produced by the agency of some spiritual beings, who either amuse, or employ themselves seriously, in engaging mankind in all those imaginary transactions with which they are employed in dreaming. The theory of Democritus and Lucretius is equally whimsical. They accounted for dreams by supposing that spectres, and simulacra of corporeal things constantly emitted from them, and floating up and down in the air, come and assault the soul in sleep. The most prevailing doctrine is that of the Cartesians, who supposed that the mind was

versation, it was still greater. Nor did the protrusion occur in jerks, alternating with recessions, as if caused by the impulse of the arterial blood. It remained steady while conversation lasted."

continually active in sleep; in other words, that during this state we were always dreaming. Hazlitt, in his "Round Table," has taken the same view of the subject, and alleges, that if a person is awakened at any given time and asked what he has been dreaming about, he will at once be recalled to a train of associations with which his mind had been busied previously. Unfortunately for this theory, it is not sustained by facts; experiments made on purpose having shown that though in some few instances, the individual had such a consciousness of dreaming as is described, yet in the great majority he had no consciousness of any thing of the kind. The doctrine, therefore, so far as direct evidence is concerned, must fall to the ground; and yet, unsupported as it is either by proof or analogy, this is the fashionable hypothesis of the schools, and the one most in vogue among our best metaphysical writers.

There is a strong analogy between dreaming and insanity. Dr Abercrombie defines the difference between the two states to be, that in the latter the erroneous impression, being permanent, affects the conduct; whereas in

dreaming, no influence on the conduct is produced, because the vision is dissipated on awaking. This definition is nearly, but not wholly correct; for in somnambulism and sleep-talking, the conduct is influenced by the prevailing dream. Dr Rush has, with great shrewdness, remarked, that a dream may be considered as a transient paroxysm of delirium, and delirium as a permanent dream.

Man is not the only animal subject to dreaming. We have every reason to believe that many of the lower animals do the same. Horses neigh and rear, and dogs bark and growl in their sleep. Probably, at such times, the remembrance of the chase or the combat was passing through the minds of these creatures; and they also not unfrequently manifest signs of fear, joy, playfulness, and almost every other passion.* Ruminating animals, such as the sheep and cow, dream less; but even they

* "The stag-hounds, weary with the chase,
Lay stretched upon the rushy floor,
And urged in dreams the forest race
From Teviot-stone to Eskdale moor."

Lay of the Last Minstrel.

are sometimes so affected, especially at the period of rearing their young. The parrot is said to dream, and I should suppose some other birds do the same. Indeed, the more intellectual the animal is, the more likely is it to be subject to dreaming. Whether fishes dream it is impossible to conjecture: nor can it be guessed, with any thing like certainty, at what point in the scale of animal intellect, the capability of dreaming ceases, although it is very certain there is such a point. I apprehend that dreaming is a much more general law than is commonly supposed, and that many animals dream which are never suspected of doing so.

Some men are said never to dream, and others only when their health is disordered: Dr Beattie mentions a case of the latter description. For many years before his death, Dr Reid had no consciousness of ever having dreamed; and Mr Locke takes notice of a person who never did so till his twenty-sixth year, when he began to dream in consequence of having had a fever. It is not impossible, however, but that, in these cases, the individuals may have had dreams from the same

age as other people, and under the same circumstances, although probably they were of so vague a nature, as to have soon faded away from the memory.

Dreams occur more frequently in the morning than in the early part of the night; a proof that the sleep is much more profound in the latter period than in the former. Towards morning the faculties, being refreshed by sleep, are more disposed to enter into activity: and this explains why, as we approach the hours of waking, our dreams are more fresh and vivid. Owing to the comparatively active state of the faculties, morning dreams are the more rational—whence the old adage, that such dreams are true.

Children dream almost from their birth; and if we may judge from what, on many occasions, they endure during sleep, we must suppose that the visions which haunt their young minds are often of a very frightful kind. Children, from many causes, are more apt to have dreams of terror than adults. In the first place, they are peculiarly subject to various diseases, such as teething, convulsions, and

bowel complaints—those fertile sources of mental terror in sleep; and, in the second place, their minds are exceedingly susceptible of dread in all its forms, and prone to be acted on by it, whatever shape it assumes. Many of the dreams experienced at this early period, leave an indelible impression upon the mind. They are remembered in after-years with feelings of pain; and, blending with the more delightful reminiscences of childhood, demonstrate that this era, which we are apt to consider one unvaried scene of sunshine and happiness, had, as well as future life, its shadows of melancholy, and was not untinged with hues of sorrow and care. The sleep of infancy, therefore, is far from being that ideal state of felicity which is commonly supposed. It is haunted with its own terrors, even more than that of adults; and, if many of the visions which people it are equally delightful, there can be little doubt that it is also tortured by dreams of a more painful character than often fall to the share of after-life.

In health, when the mind is at ease, we seldom dream; and when we do so, our visions

are generally of a pleasing character. In disease, especially of the brain, liver, and stomach, dreams are both common and of a very distressing kind.

Some writers imagine, that as we grow older, our dreams become less absurd and inconsistent, but this is extremely doubtful. Probably, as we advance in life, we are less troubled with these phenomena than at the period of youth, when imagination is full of activity, and the mind peculiarly liable to impressions of every kind; but when they do take place, we shall find them equally preposterous, unphilosophical, and crude, with those which haunted our early years. Old people dream more, however, than the middle-aged, owing doubtless to the more broken and disturbed nature of their repose.

I believe that dreams are uniformly the resuscitation or re-embodiment of thoughts which have formerly, in some shape or other, occupied the mind. They are old ideas revived either in an entire state, or heterogeneously mingled together. I doubt if it be possible for a person to have, in a dream, any

idea whose elements did not, in some form, strike him at a previous period. If these break loose from their connecting chain, and become jumbled together incoherently, as is often the case, they give rise to absurd combinations; but the elements still subsist, and only manifest themselves in a new and unconnected shape. As this is an important point, and one which has never been properly insisted upon, I shall illustrate it by an example. I lately dreamed that I walked upon the banks of the Great Canal in the neighbourhood of Glasgow. On the side opposite to that on which I was, and within a few feet of the water, stood the splendid portico of the Royal Exchange. A gentleman, whom I knew, was standing upon one of the steps, and we spoke to each other. I then lifted a large stone, and poised it in my hand, when he said that he was sure I could not throw it to a certain spot which he pointed out. I made the attempt, and fell short of the mark. At this moment, a well known friend came up, whom I knew to excel at *putting* the stone; but, strange to say, he had lost both his legs, and walked upon wooden

substitutes. This struck me as exceedingly curious; for my impression was that he had only lost one leg, and had but a single wooden one. At my desire he took up the stone, and, without difficulty, threw it beyond the point indicated by the gentleman upon the opposite side of the canal. The absurdity of this dream is extremely glaring; and yet, on strictly analyzing it, I find it to be wholly composed of ideas, which passed through my mind on the previous day, assuming a new and ridiculous arrangement. I can compare it to nothing but to cross-readings in the newspapers, or to that well known amusement which consists in putting a number of sentences, each written on a separate piece of paper, into a hat, shaking the whole, then taking them out one by one as they come, and seeing what kind of medley the heterogeneous compound will make when thus fortuitously put together. For instance, I had, on the above day, taken a walk to the canal along with a friend. On returning from it, I pointed out to him a spot where a new road was forming, and where, a few days before one of the workmen had been overwhelmed by

a quantity of rubbish falling upon him, which fairly chopped off one of his legs, and so much damaged the other that it was feared amputation would be necessary. Near this very spot there is a park in which, about a month previously, I practised throwing the stone. On passing the Exchange on my way home, I expressed regret at the lowness of its situation, and remarked what a fine effect the portico would have were it placed upon more elevated ground. Such were the previous circumstances, and let us see how they bear upon the dream.

In the first place, the canal appeared before me. 2. Its situation is an elevated one. 3. The portico of the Exchange, occurring to my mind as being placed too low, became associated with the elevation of the canal, and I placed it close by on a similar altitude. 4. The gentleman I had been walking with was the same whom, in the dream, I saw standing upon the steps of the portico. 5. Having related to him the story of the man who lost one limb, and had a chance of losing another, this idea brings before me a friend with a brace of wooden legs, who, moreover, appears in con-

nexion with putting the stone, as I know him to excel at that exercise. There is only one other element in the dream which the preceding events will not account for, and that is, the surprise at the individual referred to having more than one wooden leg. But why should he have even one, seeing that in reality he is limbed like other people? This also I can account for. Some years ago, he slightly injured his knee while leaping a ditch, and I remember of jocularly advising him to get it cut off. I am particular in illustrating this point with regard to dreams, for I hold, that if it were possible to analyze them all, they would invariably be found to stand in the same relation to the waking state as the above specimen. The more diversified and incongruous the character of a dream, and the more remote from the period of its occurrence the circumstances which suggest it, the more difficult does its analysis become; and, in point of fact, this process may be impossible, so totally are the elements of the dream often dissevered from their original source, and so ludicrously huddled together. This subject

shall be more fully demonstrated in speaking of the remote causes of dreams.

Dreams generally arise without any assignable cause, but sometimes we can very readily discover their origin. Whatever has much interested us during the day, is apt to resolve itself into a dream; and this will generally be pleasurable, or the reverse according to the nature of the exciting cause. If, for instance, our reading or conversation be of horrible subjects, such as spectres, murders, or conflagrations, they will appear before us magnified and heightened in our dreams. Or if we have been previously sailing upon a rough sea, we are apt to suppose ourselves undergoing the perils of shipwreck. Pleasurable sensations during the day are also apt to assume a still more pleasurable aspect in dreams. In like manner, if we have a longing for any thing, we are apt to suppose that we possess it. Even objects altogether unattainable are placed within our reach: we achieve impossibilities, and triumph with ease over the invincible laws of nature.

A disordered state of the stomach and liver

will often produce dreams. Persons of bad digestion, especially hypochondriacs, are harassed with visions of the most frightful nature. This fact was well known to the celebrated Mrs Radcliffe, who, for the purpose of filling her sleep with those phantoms of horror, which she has so forcibly embodied in the "Mysteries of Udolpho," and "Romance of the Forest," is said to have supped upon the most indigestible substances; while Dryden and Fuseli, with the opposite view of obtaining splendid dreams, are reported to have eaten raw flesh. Diseases of the chest, where the breathing is impeded, also give rise to horrible visions, and constitute the frequent causes of that most frightful modification of dreaming—night-mare.

The usual intoxicating agents have all the power of exciting dreams. The most exquisite visions, as well as the most frightful, are perhaps those occasioned by narcotics. These differences depend on the dose, and the particular state of the system at the time of taking it. Dreams also may arise from the deprivation of customary stimuli such as spirits, or

supper before going to bed. More frequently, however, they originate from indulging in such excitations.

A change of bed will sometimes induce dreams; and, generally speaking, they are more apt to occur in a strange bed than in the one to which we are accustomed.

Dreams often arise from the impressions made upon the senses during sleep. Dr Beattie speaks of a man on whom any kind of dream could be induced, by his friends gently speaking in his presence upon the particular subject which they wished him to dream about. I have often tried this experiment upon persons asleep, and more than once with a like result. I apprehend, that when this takes place, the slumber must have been very imperfect. With regard to the possibility of dreams being produced by bodily impressions, Dr Gregory relates, that having occasion to apply a bottle of hot water to his feet when he went to bed, he dreamed that he was making a journey to the top of Mount Etna, and that he found the heat of the ground almost insufferable. Another person having a blister

applied to his head, imagined that he was scalped by a party of Indians; while a friend of mine happening to sleep in damp sheets, dreamed that he was dragged through a stream. Another friend dreamed that he was stroking a kitten which in consequence purred most lustily. On awaking, he found that the working of the heavy machinery of a neighbouring mill was slightly shaking his bed, and making the joints produce a sound like the purring of a cat. A paroxysm of gout during sleep, has given rise to the person supposing himself under the power of the Inquisition, and undergoing the torments of the rack. The bladder is sometimes emptied during sleep, from the dreaming idea being directed (in consequence of the unpleasant fulness of the viscus) to this particular want of nature. These results are not uniform, but such is the path in which particular bodily states are apt to lead the imagination; and dreams, occurring in these states, will more frequently possess a character analogous to them than to any other—modified, of course, by the strength of the individual cause, and fertility of the fancy.

Some curious experiments in regard to this point, were made by M. Girou de Buzareingues, which seem to establish the practicability of a person determining at will the nature of his dreams. By leaving his knees uncovered, he dreamed that he travelled during night in a diligence: travellers, he observes, being aware that in a coach it is the knees that get cold during the night. On another occasion, having left the posterior part of his head uncovered, he dreamed that he was present at a religious ceremony performed in the open air. It was the custom of the country in which he lived to have the head constantly covered, except on particular occasions, such as the above. On awaking, he felt the back of his neck cold, as he had often experienced during the real scenes, the representation of which had been conjured up by his fancy. Having repeated this experiment at the end of several days, to assure himself that the result was not the effect of chance, the second vision turned out precisely the same as the first. Even without making experiments, we have frequent evidence of similar facts; thus, if the clothes chance to

fall off us, we are liable to suppose that we are parading the streets in a state of nakedness, and feel all the shame and inconvenience which such a condition would in reality produce. We see crowds of people following after us and mocking our nudity; and we wander from place to place seeking a refuge under this ideal misfortune. Fancy, in truth, heightens every circumstance, and inspires us with greater vexation than we would feel if actually labouring under such an annoyance. The streets in which we wander are depicted with the force of reality; we see their windings, their avenues, their dwelling-places, with intense truth. Even the inhabitants who follow us are exposed to view in all their various dresses and endless diversities of countenance. Sometimes we behold our intimate friends gazing upon us with indifference, or torturing with annoying impertinence. Sometimes we see multitudes whom we never beheld before; and each individual is exposed so vividly, that we could describe, or even paint his aspect.

In like manner, if we lie awry, or if our feet slip over the side of the bed, we often

imagine ourselves standing upon the brink of a fearful precipice, or falling from its beetling summit into the abyss beneath.* If the rain or hail patter against our window, we have often the idea of a hundred cataracts pouring from the rocks; if the wind howl without, we are suddenly wrapt up in a thunder-storm, with all its terrible associations; if the head happen to slip under the pillow, a huge rock is hanging over us, and ready to crush us beneath its ponderous bulk. Should the heat of the body chance to be increased by febrile irritation or the temperature of the room, we may suppose ourselves basking under the fiery sun of Africa; or if, from any circumstance, we labour under a chill, we may then be careering and foundering among the icebergs of the pole, while the morse and the famished bear are prowling around us, and claiming us

* Dr Currie, in allusion to the visions of the hypochondriac, observes, that if he dream of falling into the sea, he awakes just as the waters close over him, and is sensible of the precise gurgling sound which those experience who actually sink under water. In falling from heights, during dreams, we always awake before reaching the ground.

for their prey. Dr Beattie informs us, that once, after riding thirty miles in a high wind, he passed the night in visions terrible beyond description. The extent, in short, to which the mind is capable of being carried in such cases, is almost incredible. Stupendous events arise from the most insignificant causes—so completely does sleep magnify and distort every thing placed within its influence. The province of dreams is one of intense exaggeration—exaggeration beyond even the wildest conceptions of Oriental romance.

A smoky chamber, for instance, has given rise to the idea of a city in flames. The conflagrations of Rome and Moscow may then pass in terrific splendour before the dreamer's fancy. He may see Nero standing afar off, surrounded by his lictors and guards, gazing upon the imperial city wrapt in flames: or the sanguinary fight of Borodino, followed by the burning of the ancient capital of Russia, may be presented before him with all the intensity of reality. Under these circumstances, his whole being may undergo a change. He is no longer a denizen of his native country,

but of that land to which his visions have transported him. All the events of his own existence fade away; and he becomes a native of Rome or Russia, gazing upon the appalling spectacle.

On the other hand, the mind may be filled with imagery equally exaggerated, but of a more pleasing character. The sound of a flute in the neighbourhood may invoke a thousand beautiful and delightful associations. The air is, perhaps, filled with the tones of harps, and all other varieties of music—nay, the performers themselves are visible; and while the cause of this strange scene is one trivial instrument, we may be regaled with a rich and melodious concert. For the same reason, a flower being applied to the nostrils may, by affecting the sense of smell, excite powerfully the imagination, and give the dreamer the idea of walking in a garden.

There is one fact connected with dreams which is highly remarkable. When we are suddenly awaked from a profound slumber by a loud knock at, or by the rapid opening of, the door, a train of actions which it would

take hours, or days, or even weeks to accomplish, sometimes passes through the mind. Time, in fact, seems to be in a great measure annihilated. An extensive period is reduced, as it were, to a single point, or rather a single point is made to embrace an extensive period. In one instant, we pass through many adventures, see many strange sights, and hear many strange sounds. If we are awaked by a loud knock, we have perhaps the idea of a tumult passing before us, and know all the characters engaged in it—their aspects, and even their very names. If the door open violently, the flood-gates of a canal may appear to be expanding, and we may see the individuals employed in the process, and hear their conversation, which may seem an hour in length. If a light be brought into the room, the notion of the house being in flames perhaps invades us, and we are witnesses to the whole conflagration from its commencement till it be finally extinguished. The thoughts which arise in such situations are endless, and assume an infinite variety of aspects. The whole, indeed, constitutes one of the strangest phenomena of

the human mind, and calls to recollection the story of the Eastern monarch, who, on dipping his head into the magician's water-pail, fancied he had travelled for years in various nations, although he was only immersed for a single instant. This curious psychological fact, though occurring under somewhat different circumstances, has not escaped the notice of Mr De Quincey, better known as the "English Opium-Eater." "The sense of space," says he, "and, in the end, the *sense of time*, were both powerfully affected. Buildings, landscapes, &c., were exhibited in proportions so vast as the bodily eye is not fitted to receive. Space swelled, and was amplified to an extent of unutterable infinity. This, however, did not disturb me so much as the expansion of time. I sometimes seemed to have lived for seventy or a hundred years in one night; nay, sometimes had feelings representative of a millenium passed in that time, or, however, of a duration far beyond the limits of any human experience." In this singular case, the organs of *Size* and *Time* must have been immediately excited, to give rise to such strange results.

Every person must have experienced this apparent expansion of time in his visions. I lately dreamed that I made a voyage to India—remained some days in Calcutta—returned home—then took ship for Egypt, where I visited the cataracts of the Nile, Grand Cairo, and the Pyramids; and, to crown the whole, had the honour of an interview with Mehemet Ali, Cleopatra, and Alexander the Great. All this was the work of a single night, probably of a single hour, or even a few minutes; and yet it appeared to occupy at least twelve months.*

* When Lavalette was in prison, and under sentence of death, he had the following dream, which strongly confirms what I have just mentioned:—"One night," says he, "while I was asleep, the clock of the *Palais de Justice* struck twelve, and awoke me. I heard the gate open to relieve the sentry, but I fell asleep again immediately. In this sleep, I dreamed I was standing in the *Rue St Honoré*, at the corner of the *Rue de l'Echelle*. A melancholy darkness spread around me; all was still; nevertheless, a slow and uncertain sound soon arose. All of a sudden, I perceived at the bottom of the street, and advancing towards me, a troop of cavalry, the men and horses, however, all flayed. The men held torches in their hands, the red flames of which illuminated faces without skin, and bloody muscles.

I must also mention another circumstance of a somewhat similar kind, which, though it

Their hollow eyes rolled fearfully in their large sockets, their mouths opened from ear to ear, and helmets of hanging flesh covered their hideous heads. The horses dragged along their own skins in the kennels, which overflowed with blood on both sides. Pale and dishevelled women appeared and disappeared alternately at the windows, in dismal silence; low inarticulate groans filled the air; and I remained in the street alone, petrified with horror, and deprived of strength sufficient to seek my safety by flight. This horrible troop continued passing rapidly in a rapid gallop, and casting frightful looks on me. Their march, I thought, continued for *five hours*, and they were followed by an immense number of artillery-waggon full of bleeding corpses, whose limbs still quivered; a disgusting smell of blood and bitumen almost choked me. At length the iron gate of the prison shutting with great force, awoke me again. I made my repeater strike; it was no more than *midnight*: so that the horrible phantasmagoria had lasted no more than *two or three minutes*—that is to say, the time necessary for *relieving the sentry* and shutting the gate. The cold was severe, and the watchword short. The next day the turnkey confirmed my calculations. I nevertheless do not remember one single event in my life, the duration of which I have been able more exactly to calculate, of which the details are deeper engraven in my memory, and of which I preserve a more perfect consciousness." —*From a Biographical Sketch of Lavalette in the Recue de Paris.*

occur in the waking condition, is produced by the peculiar effect of previous sleep upon the mind. Thus, when we awake in a melancholy mood, the result probably of some distressing dream, the remembrance of all our former actions, especially those of an evil character, often rushes upon us as from a dark and troubled sea.* They do not appear individually, one by one, but come linked together in a close phalanx, as if to take the conscience by storm, and crush it beneath their imposing front. The whole span of our existence, from childhood downwards, sends them on; oblivion opens its gulfs and impels them forwards; and the mind is robed in a cloud of wretchedness, without one ray of hope to brighten up its gloom. In common circumstances, we possess no such power of grouping so instantaneously the most distant and proximate events of life: the spell of memory is invoked to call them successively from the past; and they glide be-

* Something similar occurs in drowning. Persons recovered from this state have mentioned that, in the course of a single minute, almost every event of their life has been brought to their recollection.

fore us like shadows, more or less distinct according to their remoteness, or the force of their impress upon the mind. But in the case of which I speak, they start abruptly forth from the bosom of time, and overwhelm the spirit with a crowd of most sad and appalling reminiscences. In the crucible of our distorted imagination, every thing is exaggerated and invested with a blacker gloom than belongs to it; we see at one glance down the whole vista of time; and each event of our life is written there in gloomy and distressing characters. Hence the mental depression occurring under these circumstances, and even the remorse which falls, like bitter and unrefreshing dews, upon the heart.

We have seldom any idea of past events in dreams; if such are called forth, they generally seem to be present and in the process of actual occurrence. We may dream of Alexander the Great, but it is as of a person who is co-existent with ourselves.

Dreams being produced by the active state of such organs as are dissociated from, or have not sympathized in, the general slumber, par-

take of the character of those whose powers are in greatest vigour, or farthest removed from the somnolent state. A person's natural character, therefore, or his pursuits in life, by strengthening one faculty, make it less susceptible, than such as are weaker, of being overcome by complete sleep; or, if it be overcome, it awakes more rapidly from its dormant state, and exhibits its proper characteristics in dreams. Thus, the miser dreams of wealth, the lover of his mistress, the musician of melody, the philosopher of science, the merchant of trade, and the debtor of duns and bailiffs. In like manner, a choleric man is often passionate in his sleep; a vicious man's mind is filled with wicked actions; a virtuous man's with deeds of benevolence; a humorist with ludicrous ideas. Pugnacious people often fight on such occasions, and do themselves serious injury by striking against the posts of the bed; while persons addicted to lying, frequently dream of exercising their favourite vocation.

For such reasons, persons who have a strong passion for music often dream of singing and

composing melodies; and the ideas of some of our finest pieces are said to have been communicated to the musician in his sleep. Tartini, a celebrated violin player, is said to have composed his famous *Devil's Sonata* from the inspiration of a dream, in which the Devil appeared to him, and challenged him to a trial of skill upon his own fiddle. A mathematician, in like manner, is often engaged in the solution of problems, and has his brain full of Newton, Euler, Euclid, and Laplace: while a poet is occupied in writing verses, or in deliberating upon the strains of such bards as are most familiar to his spirit: it was thus in a dream that Mr Coleridge composed his splendid fragment of *Kubla Khan*.* To speak

* The following is the account he himself gives of the circumstance:—"In the summer of the year 1797, the author, then in ill health, had retired to a lonely farmhouse between Porlock and Linton, on the Exmoor confines of Somerset and Devonshire. In consequence of a slight indisposition, an anodyne had been prescribed, from the effects of which he fell asleep in his chair at the moment that he was reading the following sentence, or words of the same substance, in 'Purchas's pilgrimage':—"Here the Khan Kubla commanded a palace to

phrenologically: if the organs of *Form* and *Size* be large, then material images more than sounds or abstractions possess the mind, and every thing may be magnified to unnatural dimensions; if *Colour* be fully developed, whatever is presented to the mental eye is

be built, and a stately garden thereunto. And thus ten miles of fertile ground were enclosed with a wall.' The author continued for about three hours in a profound sleep, at least of the external senses, during which time he had the most vivid confidence, that he could not have composed less than from two to three hundred lines; if that indeed can be called composition in which all the images rose up before him as *things*, with a parallel production of the correspondent expressions, without any sensation or consciousness of effort. On awaking, he appeared to himself to have a distinct recollection of the whole; and taking his pen, ink, and paper, instantly and eagerly wrote down the lines that are here preserved. At this moment he was unfortunately called out by a person on business from Porlock, and detained by him above an hour; and on his return to his room, found, to his no small surprise and mortification, that though he still retained some vague and dim recollection of the general purport of the vision; yet, with the exception of some eight or ten scattered lines and images, all the rest had passed away like the images on the surface of a stream into which a stone had been cast, but alas! without the after-restoration of the latter."

brilliant and gaudy, and the person has probably the idea of rich paintings, shining flowers, or varied landscapes; should *Locality* predominate, he is carried away to distant lands, and beholds more extraordinary sights than Cook, Ross, or Franklin ever described. An excess of *Cautiousness* will inspire him with terror; an excess of *Self-esteem* cause him to be placed in dignified situations; while *Imitation* may render him a mimic or a player; *Language*, a wrangler or philologist; *Secretiveness*, a deceiver; *Acquisitiveness*, a thief. Occasionally, indeed, the reverse is the case, and those trains of thought in which we mostly indulge are seldom or never the subjects of our dreams. Some authors even assert that when the mind has been strongly impressed with any peculiar ideas, such are less likely to occur in dreams than their opposites; but this is taking the exception for the general rule, and is directly at variance with both experience and analogy. In fact, whatever propensities or talents are strongest in the mind of the individual, will, in most cases, manifest themselves with greatest readiness and force in

dreams; and where a faculty is very weak it will scarcely manifest itself at all. Thus, one person who has large *Tune* and small *Causality* will indulge in music, but seldom in ascertaining the nature of cause and effect; while another, with a contrary disposition of organs, may attempt to reason upon abstract truths, while music will rarely intrude into the temple of his thoughts. It is but fair to state, however, that the compositions, the reasonings, and the poems which we concoct in sleep, though occasionally superior to those of our waking hours,* are generally of a very absurd description; and, how admirable soever they may have appeared, their futility is abundantly evident when we awake. To use the words of Dr Parr, "In dreams we seem to reason, to argue, to compose; and in all these circumstances during sleep, we are highly gratified,

* Such was the case with Cabanis, who often, during dreams, saw clearly into the bearings of political events which had baffled him when awake: and with Condorcet, who, when engaged in some deep and complicated calculations, was frequently obliged to leave them in an unfinished state, and retire to rest, when the results to which they led were at once unfolded in his dreams.

and think that we excel. If, however, we remember our dreams, our reasonings we find to be weak, our arguments we find to be inconclusive, and our compositions trifling and absurd." The truth of these remarks is undeniable; but the very circumstance of a man's dreams turning habitually upon a particular subject—however ridiculously he may meditate thereupon—is a strong presumption that that subject is the one which most frequently engrosses his faculties in the waking state: in a word, that the power most energetic in the latter condition is that also most active in dreams.

Dreams are sometimes useful in affording prognostics of the probable termination of several diseases. Violent and impetuous dreams occurring in fevers generally indicate approaching delirium; those of a gloomy terrific nature give strong grounds to apprehend danger; while dreams of a pleasant cast may be looked upon as harbingers of approaching recovery. The visions, indeed, which occur in a state of fever are highly distressing: the mind is vehemently hurried on from one train

of ideas to another, and participates in the painful activity of the system. Those generated by hypochondria or indigestion are equally afflicting, but more confined to one unpleasant idea—the intellect being overpowered, as it were, under the pressure of a ponderous load, from which it experiences an utter incapacity to relieve itself. The febrile dream has a fiery, volatile, fugitive character: the other partakes of the nature of night-mare, in which the faculties seem frozen to torpor, by the presence of a loathsome and indolent fiend.

Other diseases and feelings besides fever give a character to dreams. The dropsical subject often has the idea of fountains, and rivers, and seas, in his sleep; jaundice tinges the objects beheld with its own yellow and sickly hue; hunger induces dreams of eating agreeable food; an attack of inflammation disposes us to see all things of the colour of blood; excessive thirst presents us with visions of dried up streams, burning sand-plains, and immitigable heat; a bad taste in the mouth, with the idea of every thing bitter and nauseous.

If, from any cause, we chance to be relieved from the physical suffering occasioning such dreams, the dreams themselves also wear away, or are succeeded by others of a more pleasing description. Thus, if perspiration succeed to feverish heat, the person who, during the continuance of the latter, fancied himself on the brink of a volcano, or broiled beneath an African sun, is transported to some refreshing stream, and enjoys precisely the pleasure which such a transition would produce did it actually take place.

Some authors imagine that we never dream of objects which we have not seen; but the absurdity of this notion is so glaring as to carry its own refutation along with it. I have a thousand times dreamed of such objects.

When a person has a strong desire to see any place or object which he has never seen before, he is apt to dream about it; while, as soon as his desire is gratified, he often ceases so to dream. I remember of hearing a great deal of the beauty of Rouen Cathedral, and in one form or other it was constantly presented before my imagination in dreams, but having

at last seen the cathedral I never again dreamed about it. This is not the invariable result of a gratified wish; but it happens so often that it may be considered a general rule.

Sometimes we awake from dreams in a pleasing at other times in a melancholy mood, without being able to recollect them. They leave a pleasurable or disagreeable impression upon the mind, according doubtless to their nature; and yet we cannot properly remember what we were dreaming about. Sometimes, though baffled at the time, we can recall them afterwards, but this seldom happens.

It often happens that the dreamer, under the influence of a frightful vision, leaps from his bed and calls aloud in a paroxysm of terror. This is very frequently the case with children and persons of weak nerves; but it may happen even with the strongest minded. There is something peculiarly horrible and paralyzing in the terror of sleep. It lays the energies of the soul prostrate before it, crushes them to the earth as beneath the weight of an enormous vampyre, and equalizes for a time the courage of the hero and the child. No

firmness of mind can at all times withstand the influence of these deadly terrors. The person awakes panic-struck from some hideous vision; and even after reason returns and convinces him of the unreal nature of his apprehensions, the panic for some time continues, his heart throbs violently, he is covered with cold perspiration, and hides his head beneath the bed-clothes, afraid to look around him, lest some dreadful object of alarm should start up before his affrighted vision. Courage and philosophy are frequently opposed in vain to these appalling terrors. The latter dreads what it disbelieves; and spectral forms, sepulchral voices, and all the other horrid superstitions of sleep arise to vindicate their power over that mind, which, under the fancied protection of reason and science, conceived itself shielded from all such attacks, but which, in the hour of trial, often sinks beneath their influence as completely as the ignorant and unreflecting hind, who never employed a thought as to the real nature of these fantastic and illusive sources of terror. The alarm of a frightful dream is sometimes so overpowering,

that persons under the impression, thus generated, of being pursued by some imminent danger, have actually leaped out of the window to the great danger and even loss of their lives. In the 9th volume of the "Philosophical Transactions of the Royal Society of London," a curious case is given by Archdeacon Squire, of a person who, after having been dumb for years, recovered the use of his speech by means of a dream of this description: "One day, in the year 1741, he got very much in liquor, so much so, that on his return home at night to Devizes, he fell from his horse three or four times, and was at last taken up by a neighbour, and put to bed in a house on the road. He soon fell asleep; when, dreaming that he was falling into a furnace of boiling wort, it put him into so great an agony of fright, that, struggling with all his might to call out for help, he actually did call out aloud, and recovered the use of his tongue that moment, as effectually as he ever had it in his life, without the least hoarseness or alteration in the old sound of his voice."

There have been instances where the terror

of a frightful dream has been so great as even to produce insanity. Many years ago, a woman in the West Highlands, in consequence of a dream of this kind, after being newly brought to bed, became deranged, and soon after made her escape to the mountains, where, for seven years, she herded with the deer, and became so fleet that the shepherds and others, by whom she was occasionally seen, could never arrest her. At the end of this term, a very severe storm brought her and her associates to the valley, when she was surrounded, caught, and conveyed to her husband, by whom she was cordially received and treated with the utmost kindness. In the course of three months, she regained her reason, and had afterwards several children. When caught, her body is said to have been covered with hair, thus giving a colour to the story of Orson and other wild men of the wood.

Instances have not been wanting where, under the panic of a frightful vision, persons have actually committed murder. They awake from such a dream—they see some person standing in the room, whom they mistake for

an assassin, or dreadful apparition : driven to desperation by terror, they seize the first weapon that occurs, and inflict a fatal wound upon the object of their alarm. Hoffbauer, in his Treatise on Legal Medicine, relates a case of this kind. Although he does not state that the circumstance which occasioned the panic was a previous dream of terror, I do not doubt that such, in reality, must have been the case. "A report," says he, "of the murder committed by Bernard Schidmaizig was made by the Criminal College of Silesia. Schidmaizig awoke suddenly at midnight : at the moment of awaking, he beheld a frightful phantom (at least his imagination so depicted it) standing near him, (in consequence of the heat of the weather he slept in an open coach-house.) Fear, and the obscurity of the night, prevented him from recognising any thing distinctly, and the object which struck his vision appeared to him an actual spectre. In a tremulous tone, he twice called out, *who goes there ?*—he received no answer, and imagined that the apparition was approaching him. Frightened out of his judgment, he sprang from his bed, seized a

hatchet which he generally kept close by him; and with this weapon assaulted the imaginary spectre. To see the apparition, to call out, *who goes there?* and to seize the hatchet were the work of a moment; he had not an instant for reflection, and with one blow the phantom was felled to the ground. Schidmaizig uttered a deep groan. This, and the noise occasioned by the fall of the phantom, completely restored him to his senses; and all at once the idea flashed across his mind that he must have struck down his wife, who slept in the same coach-house. Falling instantly upon his knees, he raised the head of the wounded person, saw the wound which he had made, and the blood that flowed from it; and in a voice full of anguish exclaimed, *Susannah, Susannah, come to yourself!* He then called his eldest daughter, aged eight years, ordered her to see if her mother was recovering, and to inform her grandmother that he had killed her. In fact it was his unhappy wife who received the blow, and she died the next day.*

* This case is highly important in a legal point of view; and to punish a man for acting similarly in such

The passion of horror is more frequently felt in dreams than at any other period. Horror is intense dread, produced by some unknown or superlatively disgusting object. The visions of sleep, therefore, being frequently undefined, and of the most revolting description, are apt to produce this emotion, as they are to occasion simple fear. Under its influence, we may suppose that fiends are lowering upon us; that dismal voices, as from the bottomless pit, or from the tomb, are floating around us; that we are haunted by apparitions; or that serpents, scorpions, and demons are our bed-fellows. Such sensations are strongly akin to those of night-mare; but between this complaint and a mere dream of terror, there

a state would be as unjust as to inflict punishment for deeds committed under the influence of insanity or somnambulism. "This man," as Hoffbauer properly remarks, "did not enjoy the free use of his senses: he knew not what he saw: he believed that he was repulsing an unlooked-for attack. He soon recognised the place where he usually slept: it was natural that he should seize the hatchet since he had taken the precaution to place it beside him; but the idea of his wife and the possibility of killing her were the last things that occurred to him."

is a considerable difference. In incubus, the individual feels as if his powers of volition were totally paralyzed; and as if he were altogether unable to move a limb in his own behalf, or utter a cry expressive of his agony. When these feelings exist, we may consider the case to be one of night-mare: when they do not, and when, notwithstanding his terror, he seems to himself to possess unrestrained muscular motion, to run with ease, breathe freely, and enjoy the full capability of exertion, it must be regarded as a simple dream.

Dr Elliotson has remarked, with great acuteness, that dreams in which the perceptive faculties alone are concerned, are more incoherent, and subject to more rapid transitions than those in which one or more of the organs of the feelings are also in a state of activity. "Thus, in our dreams, we may walk on the brink of a precipice, or see ourselves doomed to immediate destruction by the weapon of a foe, or the fury of a tempestuous sea, and yet feel not the slightest emotion of fear, though, during the perfect activity of the brain, we may be naturally disposed to the strong mani-

festation of this feeling; again we may see the most extraordinary object or event without surprise, perform the most ruthless crime without compunction, and see what, in our waking hours, would cause us unmitigated grief, without the smallest feeling of sorrow."

Persons are to be found, who, when they speak much during sleep, are unable to remember their dreams on awaking, yet recollect them perfectly if they do not speak. This fact is not very easily accounted for. Probably when we are silent, the mind is more directed upon the subject of the dream, and not so likely to be distracted from it. There is perhaps another explanation. When we dream of speaking, or actually speak, the necessity of using language infers the exercise of some degree of reason; and thus, the incongruities of the dream being diminished, its nature becomes less striking, and consequently less likely to be remembered. Though we often dream of performing impossibilities, we seldom imagine that we are relating them to others.

When we dream of visible objects, the sensibility of the eyes is diminished in a most re-

markable manner; and on opening them, they are much less dazzled by the light than if we awoke from a slumber altogether unvisited by such dreams. A fact equally curious is noticed by Dr Darwin, in his "Zoonomia:"— "If we sleep in the day-time, and endeavour to see some object in our dreams, the light is exceedingly painful to our eyes; and, after repeated struggles, we lament in our sleep that we cannot see it. In this case, I apprehend, the eyelid is in some measure opened by the vehemence of our sensations; and the iris being dilated, shows as great, or greater, sensibility than in our waking hours."

There are some persons to whom the objects of their dreams are always represented in a soft, mellow lustre, similar to twilight. They never seem to behold any thing in the broad glare of sunshine; and, in general, the atmosphere of our vision is less brilliant than that through which we are accustomed to see things while awake.

The most vivid dreams are certainly those which have reference to sight. With regard to hearing, they are less distinctly impressed

upon the mind, and still more feebly as regards smell, or taste. Indeed, some authors are of opinion that we never dream of sounds, unless when a sound takes place to provoke the dream; and the same with regard to smell and taste; but this doctrine is against analogy, and unsupported by proof. There are, beyond doubt, certain parts of the brain which take cognizance of taste, odours, and sounds, for the same reason that there are others which recognize forms, dimensions, and colours. As the organs of the three latter sensations are capable of inward excitement, without any communication, by means of the senses, with the external world, it is no more than analogical to infer that, with the three former, the same thing may take place. In fever, although the individual is ever so well protected against the excitement of external sounds, the internal organ is often violently stimulated, and he is harassed with tumultuous noises. For such reasons, it is evident that there may be in dreams a consciousness of sounds, of tastes, and of odours, where such have no real existence from without.

Dreams are sometimes exceedingly obscure, and float like faint clouds over the spirit. We can then resolve them into nothing like shape or consistence, but have an idea of our minds being filled with dim, impalpable imagery, which is so feebly impressed upon the tablet of memory, that we are unable to embody it in language, or communicate its likeness to others.

At other times, the objects of sleep are stamped with almost supernatural energy. The dead, or the absent, whose appearance to our waking faculties had become faint and obscure, are depicted with intense truth and reality; and even their voices, which had become like the echo of a forgotten song, are recalled from the depths of oblivion, and speak to us as in former times. Dreams, therefore, have the power of brightening up the dim regions of the past, and presenting them with a force which the mere effects of unassisted remembrance could never have accomplished in our waking hours.

This property of reviving past images, is one of the most remarkable possessed by sleep.

It even goes the length, in some cases, of recalling circumstances which had been entirely forgotten, and presenting them to the mind with more than the force of their original impression. This I conceive to depend upon a particular part of the brain—that, for instance, which refers to the memory of the event—being preternaturally excited: hence, forgotten tongues are sometimes brought back to the memory in dreams, owing doubtless to some peculiar excitement of the organ of *Language*. The dreamer sometimes converses in a language of which he has no knowledge whatever when he awakes, but with which he must at one period have been acquainted. Phenomena of a similar kind occasionally occur in madness, delirium, or intoxication, all of which states have an analogy to dreaming. It is not uncommon, for instance, to witness, in the insane, an unexpected and astonishing resuscitation of knowledge—an intimacy with events and languages of which they were entirely ignorant in the sound state of their minds. In like manner, in the delirium attendant upon fevers, people sometimes speak

in a tongue* they know nothing of in health; and in drunkenness events are brought to the memory which desert it in a state of sobriety.† Analogous peculiarities occur in dreams. Forgotten facts are restored to the mind

* A girl was seized with a dangerous fever, and, in the delirious paroxysm accompanying it, was observed to speak in a strange language which, for some time, no one could understand. At last it was ascertained to be Welsh—a tongue which she was wholly ignorant of at the time she was taken ill, and of which she could not speak a single syllable after her recovery. For some time, the circumstance was unaccountable, till, on inquiry, it was found she was a native of Wales, and had been familiar with the language of that country in her childhood, but had wholly forgotten it afterwards. During the delirium of fever, the obliterated impressions of infancy were brought to her mind, and continued to operate there so long as she remained under the mental excitation occasioned by the disease, but no longer; for so soon as the state of mind which recalled these impressions was removed, they also disappeared, and she was as ignorant of Welsh as before she was taken ill.

† Mr Combe mentions the case of an Irish porter to a warehouse, who, in one of his drunken fits, left a parcel at the wrong house, and when sober could not recollect what he had done with it; but the next time he got drunk, he recollected where he had left it, and went and recovered it.

Sometimes those adhere to it and are remembered when we awake: at other times—as can be proved in cases of sleep-talking—they vanish with the dream which called them into existence, and are recollected no more.

I believe that the dreams of the aged, like their memory, relate chiefly to the events of early life, and less to those of more recent occurrence. My friend, Dr Cumin, has mentioned to me the case of one of his patients, a middle-aged man, whose visions assumed this character in consequence of severe mental anxiety. Owing to misfortunes in trade, his mind had been greatly depressed: he lost his appetite, became restless, nervous, and dejected; such sleep as he had was filled with incessant dreams, which at first were entirely of events connected with the earliest period of his life, so far as he recollected it, and never by any chance of late events. In proportion as he recovered from this state, the dreams changed their character, and referred to circumstances farther on in life; and so regular was the progression, that, with the march of his recovery, so was the onward march of his

dreams. During the worst period of his illness, he dreamed of occurrences which happened in boy-hood: no sooner was convalescence established than his visions had reference to manhood; and on complete recovery they were of those recent circumstances which had thrown him into bad health. In this curious case, one lateral half of the head was much warmer than the other. This was so remarkable as to attract the notice of the barber who shaved it.

One of the most remarkable phenomena of dreams is the absence of surprise. This, indeed, is not invariable, as every one must occasionally have felt the sensation of surprise, and been not a little puzzled in his visions to account for the phenomena which present themselves; but, as a general rule, its absence is so exceedingly common, that, when surprise does occur, it is looked upon as an event out of the common order, and remarked accordingly. Scarcely any event, however incredible, impossible, or absurd, gives rise to this sensation. We see circumstances at utter variance with the laws of nature, and yet their discordancy,

impracticability, and oddness seldom strike us as at all out of the usual course of things. This is one of the strongest proofs that can be alleged in support of the dormant condition of the reflecting faculties. Had these powers been awake, and in full activity, they would have pointed out the erroneous nature of the impressions conjured into existence by fancy; and shown us truly that the visions passing before us were merely the chimeras of excited imagination—the airy phantoms of imperfect sleep.

In visions of the dead, we have a striking instance of the absence of surprise. We almost never wonder at beholding individuals whom we yet know, in our dreams, to have even been buried for years. We see them among us, and hear them talk, and associate with them on the footing of fond companionship. Still the circumstance seldom strikes us with wonder, nor do we attempt to account for it. They still seem alive as when they were on earth, only all their qualities, whether good or bad, are exaggerated by sleep. If we hated them while in life, our animosity is now,

exaggerated to a double degree. If we loved them, our affection becomes more passionate and intense than ever. Under these circumstances, many scenes of most exquisite pleasure often take place. The slumberer supposes himself enjoying the communion of those who were dearer to him than life, and has far more intense delight than he could have experienced, had these individuals been in reality alive, and at his side.

“ I hear thy voice in dreams,
Upon me softly call,
Like echo of the mountain streams
In sportive waterfall :
I see thy form, as when
Thou wert a living thing,
And blossom'd in the eyes of men
Like any flower of spring.”

Nor is the passion of love, when experienced in dreams, less vivid than any other emotion, or the sensations to which it gives rise less pleasurable. I do not here allude to the passion in its physical sense, but to that more moral and intellectual feeling, the result of deep sensibility and attachment. Men who

never loved before, have conceived a deep affection to some particular woman in their dreams, which, continuing to operate upon them after they awoke, has actually terminated in a sincere and lasting fondness for the object of their visionary love. Men, again, who actually are in love, dream more frequently of this subject than of any thing else—fancying themselves in the society of their mistresses, and enjoying a happiness more exquisite than is compatible with the waking state—a happiness, in short, little removed from celestial. Such feelings are not confined to men: they pervade the female breast with equal intensity; and the young maiden, stretched upon the couch of sleep, may have her spirit filled with the image of her lover, while her whole being swims in the ecstasies of impassioned, yet virtuous attachment. At other times, this pure passion may, in both sexes, be blended with one of a grosser character; which also may acquire an increase of pleasurable sensation; to such an extent is every circumstance, whether of delight or suffering, exaggerated by sleep.



For the same reason that the lover dreams of love, does the newly-married woman dream of children. They, especially if she have a natural fondness for them—if she herself be pregnant, possess an ardent longing for offspring—are often the subject of her sleeping thoughts; and she conceives herself to be encircled by them, and experiencing intense pleasure in their innocent society. Men who are very fond of children often experience the same sensations; and both men and women who are naturally indifferent in this respect, seldom dream about them, and never with any feelings of peculiar delight.

During the actual process of any particular dream, we are never conscious that we are really dreaming; but it sometimes happens that a second dream takes place, during which we have a consciousness, or a suspicion, that the events which took place in the first dream were merely visionary, and not real. People, for instance, sometimes fancy in sleep, that they have acquired wealth: this may be called the first dream; and during its progress they never for a moment doubt the reality of their

impressions; but a second one supervenes upon this, and they then begin to wonder whether their riches be real or imaginary—in other words, they try to ascertain whether they had been previously dreaming or not. But even in the second dream we are unconscious of dreaming. We still seem to ourselves to be broad awake—a proof that in dreams we are never aware of being asleep. This unconsciousness of being asleep during the dreaming state, is referrible to the quiescent condition of the reasoning powers. The mind is wholly subject to the sceptre of other faculties; and whatever emotions or images they invoke, seem to be real, for want of a controlling power to point out their true character.

“ You stood before me like a thought,
A dream remembered in a dream.”

Those troubled with deafness do not hear distinctly such sounds as they conceive to be uttered during sleep. Dr Darwin speaks of a gentleman who, for thirty years, had entirely lost his hearing, and who in his dreams never seemed to converse with any person except by

the fingers or in writing: he never had the impression of hearing them speak. In like manner a blind man seldom dreams of visible objects, and never if he has been blind from his birth. Dr Blacklock, indeed, who became blind in early infancy, may seem an exception to this rule. While asleep, he was conscious of a sense which he did not possess, in the waking state, and which bears some analogy to sight. He imagined that he was united to objects by a sort of distant contact, which was effected by threads or strings passing from their bodies to his own.

The illusion of dreams is much more complete than that of the most exquisite plays. We pass, in a second of time, from one country to another; and persons who lived in the most different ages of the world are brought together in a strange and incongruous confusion. It is not uncommon to see, at the same moment, Robert the Bruce, Julius Cæsar, and Marlborough in close conversation. Nothing, in short, however monstrous, incredible, or impossible, seems absurd. Equally striking examples of illusion occur when the person

awakes from a dream, and imagines that he hears voices or beholds persons in the room beside him. In the first cases we are convinced, on awaking, of the deceptive nature of our visions, from the utter impossibility of their occurrence: they are at variance with natural laws; and a single effort of reason is sufficient to point out their absolute futility. But when the circumstances which seem to take place are not in themselves conceived impossible, however unlikely they may be, it is often a matter of the utmost difficulty for us to be convinced of their real character. On awaking, we are seldom aware that, when they took place, we laboured under a dream. Such is their deceptive nature, and such the vividness with which they appear to strike our senses, that we imagine them real; and accordingly often start up in a paroxysm of terror, having the idea that our chamber is invaded by thieves, that strange voices are calling upon us, or that we are haunted by the dead. When there is no way of confuting these impressions, they often remain rootedly fixed in the mind, and are regarded as actual events, instead of the

mere chimeras of sleep. This is particularly the case with the weak-minded and superstitious, whose feelings are always stronger than their judgments; hence the thousand stories of ghosts and warnings with which the imaginations of these persons are haunted—hence the frequent occurrence of nocturnal screaming and terror in children, whose reflecting faculties are naturally too weak to correct the impressions of dreams, and point out their true nature—hence the painful illusions occurring even to persons of strong intellect, when they are debilitated by watchfulness, long-continued mental suffering, or protracted disease. These impressions often arise without any apparent cause: at other times the most trivial circumstances will produce them. A voice, for instance, in a neighbouring street, may seem to proceed from our own apartment, and may assume a character of the most appalling description; while the tread of footsteps, or the knocking of a hammer over-head, may resolve itself into a frightful figure stalking before us.

“I know,” says Mr Waller, “a gentleman,

who is living at this moment a needless slave to terror, which arises from a circumstance which admits easily of explanation. He was lying in his bed with his wife, and, as he supposed, quite awake, when he felt distinctly the impression of some person's hand upon his right shoulder, which created such a degree of alarm that he dared not to move himself in bed, and indeed, could not, if he had possessed the courage. It was some time before he had it in his power to awake his wife, and communicate to her the subject of his terror. The shoulder which had felt the impression of the hand, continued to feel benumbed and uncomfortable for some time. It had been uncovered, and, most probably, the *cold* to which it was exposed was the cause of the phenomenon.**

An attack of dreaming illusion, not, however, accompanied with any unpleasant feeling, occurred to myself lately. I had fallen accidentally asleep upon an arm-chair, and was suddenly awaked by hearing, as I supposed, two of my brothers talking and laughing at

* Waller's "Treatise on the Incubus or Night-Mare."

the door of the room, which stood wide open. The impressions were so forcible, that I could not believe them fallacious, yet I ascertained that they were so entirely; for my brothers had gone to the country an hour before, and did not return for a couple of hours afterwards.

There are few dreams involving many circumstances, which are, from beginning to end, perfectly philosophical and harmonious: there is usually some absurd violation of the laws of consistency, a want of congruity, a deficiency in the due relations of cause and effect, and a string of conclusions altogether unwarranted by the premises. Mr Hood, in his "Whims and Oddities," gives a curious illustration of the above facts. "It occurred," says he, "when I was on the eve of marriage, a season when, if lovers sleep sparingly, they dream profusely. A very brief slumber sufficed to carry me, in the night coach, to Bogner. It had been concerted between Honoria and myself that we should pass the honey-moon at some such place upon the coast. The purpose of my solitary journey was to procure an appropriate dwelling, and which, we had agreed

upon, should be a little pleasant house, with an indispensable look-out upon the sea. I chose one accordingly, a pretty villa, with bow windows, and a prospect delightfully marine. The ocean murmur sounded incessantly from the beach. A decent elderly body, in decayed sables, undertook on her part to promote the comfort of the occupants by every suitable attention, and, as she assured me, at a very reasonable rate. So far the nocturnal faculty had served me truly: a day dream could not have proceeded more orderly: but, alas! just here, when the dwelling was selected, the sea-view was secured, the rent agreed upon, when every thing was plausible, consistent, and rational, the incoherent fancy crept in, and confounded all—by marrying me to the old woman of the house!"

There are no limits to the extravagancies of those visions sometimes called into birth by the vivid exercise of the imagination. Contrasted with them, the wildest fictions of Rabelais, Ariosto, or Dante, sink into absolute probabilities. I remember of dreaming on one occasion that I possessed ubiquity, twenty

resemblances of myself, appearing in as many different places, in the same room; and each being so thoroughly possessed by my own mind, that I could not ascertain which of them was myself, and which my double, &c. On this occasion, fancy so far travelled into the regions of absurdity, that I conceived myself riding upon my own back—one of the resemblances being mounted upon another, and both animated with the soul appertaining to myself, in such a manner that I knew not whether I was the *carrier* or the *carried*. At another time, I dreamed that I was converted into a mighty pillar of stone, which reared its head in the midst of a desert, where it stood for ages, till generation after generation melted away before it. Even in this state, though unconscious of possessing any organs of sense, or being else than a mass of lifeless stone, I saw every object around—the mountains growing bald with age—the forest trees drooping in decay; and I heard whatever sounds nature is in the custom of producing, such as the thunder-peal breaking over my naked head, the winds howling past me, or the ceaseless murmur of

streams. At last I also waxed old, and began to crumble into dust, while the moss and ivy accumulated upon me, and stamped me with the aspect of hoar antiquity. The first of these visions may have arisen from reading Hoffman's "Devil's Elixir," where there is an account of a man who supposed he had a double, or, in other words, was both himself and not himself; and the second had perhaps its origin in the Heathen Mythology, a subject to which I am extremely partial, and which abounds in stories of metamorphosis.

Such dreams as occur in a state of drunkenness are remarkable for their extravagance. Exaggeration beyond limits is a very general attendant upon them; and they are usually of a more airy and fugitive character than those proceeding from almost any other source. The person seems as if he possessed unusual lightness, and could mount into the air, or float upon the clouds, while every object around him reels and staggers with emotion. But of all dreams, there are none which, for unlimited wildness, equal those produced by narcotics. An eminent artist, under the influence of

opium, fancied the ghastly figures in Holbein's "Dance of Death" to become vivified—each grim skeleton being endowed with life and motion, and dancing and grinning with an aspect of hideous reality. The "English Opium Eater," in his "Confessions," has given a great variety of eloquent and appalling descriptions of the effects produced by this drug upon the imagination during sleep. Listen to one of them:—

"Southern Asia is, and has been for thousands of years, the part of the earth most swarming with human life; the great *officina gentium*. Man is a weed in those regions. The vast empires, also, into which the enormous population of Asia has always been cast, give a farther sublimity to the feelings associated with all Oriental names or images. In China, over and above what it has in common with the rest of Southern Asia, I am terrified by the modes of life, by the manners, and the barrier of utter abhorrence and want of sympathy placed between us by feelings deeper than I can analyze. I could sooner live with lunatics or brute animals. All this, and much

more than I can say, or have time to say, the reader must enter into before he can comprehend the unimaginable horror which these dreams of Oriental imagery and mythological tortures impressed upon me. Under the connecting feeling of tropical heat and vertical sunlights, I brought together all creatures, birds, beasts, reptiles, all trees and plants, usages and appearances, that are found in all tropical regions, and assembled them together in China or Indostan. From kindred feelings I soon brought Egypt and all her gods under the same law. I was stared at, hooted at, grinned at, chattered at, by monkeys, by parquets, by cockatoos. I ran into pagodas, and was fixed for centuries at the summit, or in the secret rooms; I was the idol; I was the priest; I was worshipped; I was sacrificed. I fled from the wrath of Brama through all the forests of Asia: Vishnu hated me: Seeva laid in wait for me. I came suddenly upon Isis and Osiris: I had done a deed, they said, which the ibis and the crocodile trembled at.

I was buried for a thousand years, in stone coffins, with mummies and sphinxes, in narrow

chambers, at the heart of eternal pyramids. I was kissed, with cancerous kisses, by crocodiles, and laid confounded with all unutterable slimy things, amongst reeds and Nilotic mud."

Again: "Hitherto the human face had mixed often in my dreams, but not so despotically, nor with any special power of tormenting. But now that which I have called the tyranny of the human face began to unfold itself. Perhaps some part of my London life might be answerable for this. Be that as it may, now it was that, upon the rocking waters of the ocean, the human face began to appear; the sea appeared paved with innumerable faces, upturned to the heavens: faces imploring, wrathful, despairing, surged upwards by thousands, by myriads, by generations, by centuries;—my agitation was infinite—my mind tossed and surged with the ocean."

I have already spoken of the analogy subsisting between dreaming and insanity, and shall now mention a circumstance which occurs in both states, and points out a very marked similitude of mental condition. The same thing also occasionally, or rather frequently,

takes place in drunkenness, which is, to all intents and purposes, a temporary paroxysm of madness. It often happens, for instance, that such objects or persons as we have seen before and are familiar with, become utterly changed in dreams, and bear not the slightest resemblance to their *real* aspect. It might be thought that such a circumstance would so completely annihilate their identity as to prevent us from believing them to be what, by us, they are conceived; but such is not the case. We never doubt that the particular object or person presented to our eyes appears in its true character. In illustration of this fact, I may mention, that I lately visited the magnificent palace of Versailles in a dream, but that deserted abode of kings stood not before me as when I have gazed upon it broad awake; it was not only magnified beyond even its stupendous dimensions, and its countless splendours immeasurably increased, but the very aspect itself of the mighty pile was changed; and instead of stretching its huge Corinthian front along the entire breadth of an elaborate and richly fantastic garden,

adorned to profusion with alcoves, fountains, waterfalls, statues, and terraces, it stood alone in a boundless wilderness—an immense architectural creation of the Gothic ages, with a hundred spires and ten thousand minarets sprouting up and piercing with their pointed pinnacles the sky. The whole was as different as possible from the reality, but this never once occurred to my mind; and, while gazing upon the visionary fabric, I never doubted for an instant that it then appeared as it had ever done, and was in no degree different from what I had often previously beheld.

Another dream I shall relate in illustration of this point. It was related to me by a young lady, and, independent of its illustrative value, is well worthy of being preserved as a specimen of fine imagination.—“I dreamed,” said she, “that I stood alone upon the brink of a dreadful precipice, at the bottom of which rolled a great river. While gazing awe-struck upon the gulf below, some one from behind laid a hand upon my shoulder, and, on looking back I saw a tall, venerable figure with a long, flowing silvery beard, and clothed in white

garments, whom I at once knew to be the Saviour of the world. 'Do you see,' he inquired, 'the great river that washes the foundation of the rock upon which you now stand? I shall dry it up, so that not a drop of its waters shall remain, and all the fishes that are in it shall perish.' He then waved his hand, and the river was instantly dried up; and I saw the fishes gasping and writhing in the channel, where they all straightway died. 'Now,' said he, 'the river is dried up and the fishes are dead; but to give you a further testimony of my power, I shall bring back the flood, and every creature that was wont to inhabit it shall live again.' And he waved his hand a second time, and the river was instantly restored, its dry bed filled with volumes of water, and all the dead fishes brought back unto life. On looking round to express to him my astonishment at those extraordinary miracles, and to fall down and worship him, he was gone; and I stood by myself upon the precipice, gazing with astonishment at the river which rolled a thousand feet beneath me." In this fine vision, the difference be-

tween the aspect of Christ as he appeared in it, and as he is represented in the Sacred Writings as well as in paintings, did not suggest itself to the mind of the dreamer. He came in the guise of an aged man, which is diametrically opposite to our habitual impressions of his aspect. If it be asked what produces such differences between the reality and the representation, I apprehend we must refer it to some sudden second dream or flash of thought breaking in upon the first and confusing its character. For instance, I have a dream of an immense Gothic pile, when something about Versailles, somehow, occurs to my mind, and this I immediately associate with the object before me. The lady has the idea of an old man in her dream, and the thought of Christ happening to come across her at the instant, she identifies it involuntarily with the object of her vision. There is yet another explanation of the latter. The old man has the power of working a great miracle; so had Christ, and she is thus led to confound the two together. She, it is true, imagines she knows the old man at once to be the

Saviour, without any previous intimation of his miraculous gifts; but this, very possibly, may be a mistake; and the knowledge which she only acquires after witnessing his power, she may, by the confusion attendant on dreams, suppose to have occurred to her in the first instance. These facts, combined with the dormant state of the reflecting faculties, which do not rectify the erroneous impressions, render the explanation of such dreams sufficiently easy, however puzzling and unaccountable at first sight.

In some cases, the illusion is not merely confined to sleep, but extends itself to the waking state. To illustrate this, I may state the following circumstance:—Some years ago, my impressions concerning the aspect and localities of Inverness, were strangely confused by a dream, which I had of that town, taking so strong a hold upon my fancy as to be mistaken for a reality. I had been there before, and was perfectly familiar with the appearance of the town, but this was presented in so different a light, and with so much force by the dream, that I, at last, became unable to say

which of the two aspects was the real one. Indeed, the visionary panorama exhibited to my mind, took the strongest hold upon it; and I rather felt inclined to believe that this was the veritable appearance of the town, and that the one which I had actually beheld, was merely the illusion of the dream. This uncertainty continued for several years, till, being again in that quarter, I satisfied myself on the real state of the case. On this occasion, the dream must have occurred to my mind some time after it happened, and taken such a firm hold upon it as to dethrone the reality, and take its place. I remember distinctly of fancying that the little woody hill of Tomnahurich was in the centre of the town, although it stands at some distance from it; that the principal steeple was on the opposite side of the street to that on which it stands; and that the great mountain of Ben-Wevis, many miles off, was in the immediate neighbourhood.

The power of imagination is perhaps never so vividly displayed, as in those dreams which haunt the guilty mind. When any crime of

an infamous character has been perpetrated, and when the person is not so utterly hardened as to be insensible of his iniquity, the wide storehouse of retributive vengeance is opened up, and its appalling horrors poured upon him. In vain does he endeavour to expel the dreadful remembrance of his deeds, and bury them in forgetfulness: from the abyss of slumber they start forth, as the vampyres start from their sepulchres, and hover around him like the furies that pursued the footsteps of Orestes;—while the voice of conscience stuns his ears with murmurs of judgment and eternity. Such is the punishment reserved for the guilty in sleep. During the busy stir of active existence, they may contrive to evade the memory of their wickedness—to silence the whispers of the “still small voice” within them, and cheat themselves with a semblance of happiness; but when their heads are laid upon the pillow, the flimsy veil which hung between them and crime, melts away like an illusive vapour, and displays the latter in naked and horrid deformity. Then, in the silence of night, the “still small voice” is heard like an

echo from the tomb; then, a crowd of doleful remembrances rush in upon the criminal, no longer to be debarred from visiting the depths of his spirit; and when dreams succeed to such broken and miserable repose, it is only to aggravate his previous horrors, and present them in a character of still more overwhelming dread.*

“ Though thy slumber may be deep,
 Yet thy spirit shall not sleep;
 There are shades which will not vanish,
 There are thoughts thou canst not banish;
 By a power to thee unknown,
 Thou canst never be alone;
 Thou art wrapt as with a shroud;
 Thou art gathered in a cloud;
 And forever shalt thou dwell
 In the spirit of this spell.”

* “ No fiction of romance presents so awful a picture of the ideal tyrant as that of Caligula by Suetonius. His palace—radiant with purple and gold, but murder every-where lurking beneath flowers; his smiles and echoing laughter, masking (yet hardly meant to mask) his foul treachery of heart; his hideous and tumultuous dreams; his baffled sleep, and his sleepless nights, compose the picture of an *Æschylus*. What a master’s sketch lies in those few lines:—‘*Incitabatur insomnia*

Such are the principal phenomena of dreams; and from them it will naturally be deduced, that dreaming may occur under a great variety of circumstances; that it may result from the actual state of the body, or mind previous to falling asleep; or exist as a train of emotions which can be referred to no apparent external cause. The forms it assumes

maxime; neque enim plus tribus horis nocturnis quiescebat; ac ne his placidâ quiete, at pavidâ miris rerum imaginibus: ut qui inter ceteras pelagi quondam speciem colloquentem secum videre visus sit. Ideoque magna parte noctis, vigiliæ cubandique tædio, nunc toro residens, nunc per longissimas porticus vagus, invocare identidem atque expectare lucem consueverat;—i. e. But above all, he was tormented with nervous irritation, by sleeplessness; for he enjoyed not more than three hours of nocturnal repose; nor even these in pure, untroubled rest, but agitated by phantasmata of portentous augury; as, for example, upon one occasion he fancied that he saw the sea, under some definite impersonation, conversing with himself. Hence it was, and from this incapacity of sleeping, and from weariness of lying awake that he had fallen into habits of ranging all the night long through the palace, sometimes throwing himself on a couch, sometimes wandering along the vast corridors—watching for the earliest dawn, and anxiously invoking its approach."

Blackwood's Magazine, vol. xxxiii. p. 59.

are also as various as the causes giving rise to it, and much more striking in their nature. In dreams, imagination unfolds, most gorgeously, the ample stores of its richly decorated empire; and in proportion to the splendour of that faculty in any individual, are the visions which pass before him in sleep. But even the most dull and passionless, while under the dreaming influence, frequently enjoy a temporary inspiration: their torpid faculties are aroused from the benumbing spell which hung over them in the waking state, and lighted up with the Promethean fire of genius and romance; the prose of their frigid spirits is converted into magnificent poetry; the atmosphere around them peopled with new and unheard-of imagery; and they walk in a region to which the proudest flights of their limited energies could never otherwise have attained.

I shall conclude this chapter with a few words on the management of dreams.

When dreams are of a pleasing character, no one cares any thing about their removal: it is only when they get distressing and threaten to injure the health of the individual,

by frequent recurrence, that this becomes an important object. When dreams assume the character of night-mare, they must be managed according to the methods laid down for the cure of that affection. In all cases, the condition of the digestive organs must be attended to, as any disordered state of these parts is apt to induce visions of a very painful character. For this purpose, mild laxatives may become useful; and if the person is subject to heartburn, he should use a little magnesia, chalk, or carbonate of soda, occasionally. Attention, also, must be paid to the diet; and as suppers, with some people, have a tendency to generate dreams of all kinds, these meals should, in such cases, be carefully avoided. At the same time, great care should be taken not to brood over any subject upon lying down, but to dispel, as soon as possible, all intrusive ideas, especially if they are of a painful nature. If there is any unpleasant circumstance, such as hardness, irregularity, &c., connected with the bed, which tends to affect sleep, and thus induce dreams, it must be removed. Late reading, the use of tea or coffee shortly before

going to rest, or any thing which may stimulate the brain ought likewise to be avoided.

If dreaming seems to arise from any fulness of the system, bleeding and low diet will sometimes effect a cure. Mr Stewart, the celebrated pedestrian traveller, states that he never dreamed when he lived exclusively upon vegetable food. This, however, may not hold true with every one. "When dreams arise from a diminution of customary stimuli, a light supper, a draught of porter, a glass of wine, or a dose of opium, generally prevent them. Habitual noises, when suspended, should be restored."*

In speaking of dreams representative of danger, I may mention that there are instances of persons, who, having determined to remember that the perils seen in them are fallacious, have actually succeeded in doing so, while asleep; and have thus escaped the terrors which those imaginary dangers would otherwise have produced. Haller relates a case of this kind; and Mr Dugald Stewart mentions that the

* Rush's Medical Inquiries.

plan was successfully adopted by Dr Reid to get rid of the distress of those fearful visions by which he was frequently annoyed. Whenever, in a dream, the Doctor supposed himself on the brink of a precipice, or any other dangerous situation it was his custom to throw himself over, and thus destroy the illusion. Dr Beattie also relates, that at one time he found himself in a dangerous situation upon the parapet of a bridge. Reflecting that he was not subject to pranks of this nature, he began to fancy that it might be a dream, and determined to pitch himself over, with the conviction that this would restore him to his senses, which accordingly took place.* I could never manage to carry this system into effect in an ordinary dream of terror, but I have sometimes succeeded in doing so during an attack of night-mare; and have thus very

* These facts do not controvert what is elsewhere stated of a person never being aware, during the actual process of a dream, that he was dreaming. While the above dreams were in progress, the individuals never doubted that they were dreaming: the doubt, and the actions consequent upon it were after operations.

materially mitigated the alarm produced by that distressing sensation. This intellectual operation may also be successfully employed to dispel the lowness of spirits under which we often awake from unpleasant visions, by teaching us that the depression we experience is merely the result of some unnatural excitement in the brain. Indeed, all kinds of melancholy, not based upon some obvious foundation, might be mitigated or dispelled altogether, could we only oppose our feelings with the weapons of reason, and see things as they really are, and not as they only seem to be.

CHAPTER IV.

PROPHETIC POWER OF DREAMS.

DREAMS have been looked upon by some, as the occasional means of giving us an insight into futurity. This opinion is so singularly unphilosophical, that I would not have noticed it, were it not advocated even by persons of good sense and education. In ancient times, it was so common as to obtain universal belief; and the greatest men placed as implicit faith in it as in any fact of which their own senses afforded them cognizance. That it is wholly erroneous, however, cannot be doubted; and any person who examines the nature of the human mind, and the manner in which it operates in dreams, must be convinced, that under no circumstances, except those of a

miracle, in which the ordinary laws of nature are triumphed over, can such an event ever take place. The Sacred Writings testify that miracles were common in former times; but I believe no man of sane mind will contend that they ever occur in the present state of the world. In judging of things as now constituted, we must discard supernatural influence altogether, and estimate events according to the general laws which the Great Ruler of Nature has appointed for the guidance of the universe. If, in the present day, it were possible to conceive a suspension of these laws, it must, as in former ages, be in reference to some great event, and to serve some mighty purpose connected with the general interests of the human race; but if faith is to be placed in modern miracles, we must suppose that God suspended the above laws for the most trivial and useless of purposes—as, for instance, to intimate to a man that his grandmother will die on a particular day, that a favourite mare has broke her neck, that he has received a present of a brace of game, or that

a certain friend will step in and take pot-luck with him on the morrow!

At the same time, there can be no doubt that many circumstances occurring in our dreams have been actually verified; but this must be regarded as altogether the effect of chance; and for one dream which turns out to be true, at least a thousand are false. In fact, it is only when they are of the former description, that we take any notice of them; the latter are looked upon as mere idle vagaries, and speedily forgotten. If a man, for instance, dreams that he has gained a law-suit in which he is engaged, and if this circumstance actually takes place, there is nothing at all extraordinary in the coincidence: his mind was full of the subject, and, in sleep, naturally resolved itself into that train of ideas in which it was most deeply interested. Or if we have a friend engaged in war, our fears for his safety will lead us to dream of death or captivity, and we may see him pent up in a hostile prison-house, or lying dead upon the battle plain. And should these melancholy catastrophes ensue we call our vision to memory; and, in

the excited state of mind into which we are thrown, are apt to consider it as a prophetic warning, indicative of disaster. The following is a very good illustration of this particular point:—

Miss M——, a young lady, a native of Ross-shire, was deeply in love with an officer who accompanied Sir John Moore in the Peninsular war. The constant danger to which he was exposed, had an evident effect upon her spirits. She became pale and melancholy in perpetually brooding over his fortunes; and, in spite of all that reason could do, felt a certain conviction, that when she last parted with her lover, she had parted with him for ever. In vain was every scheme tried to dispel from her mind the awful idea: in vain were all the sights which opulence could command, unfolded before her eyes. In the midst of pomp and gaiety, when music and laughter echoed around her, she walked as a pensive phantom, over whose head some dreadful and mysterious influence hung. She was brought by her affectionate parents to Edinburgh, and introduced into all the gaiety of that metropolis,

but nothing could restore her, or banish from her mind the insupportable load which oppressed it. The song and the dance were tried in vain: they only aggravated her distress, and made the bitterness of despair more poignant. In a surprisingly short period, her graceful form declined into all the appalling characteristics of a fatal illness; and she seemed rapidly hastening to the grave, when a dream confirmed the horrors she had long anticipated, and gave the finishing stroke to her sorrows. One night, after falling asleep, she imagined she saw her lover, pale, bloody, and wounded in the breast, enter her apartment. He drew aside the curtains of the bed, and with a look of the utmost mildness, informed her that he had been slain in battle, desiring her, at the same time, to comfort herself, and not take his death too seriously to heart. It is needless to say what influence this vision had upon a mind so replete with woe. It withered it entirely, and the unfortunate girl died a few days thereafter, but not without desiring her parents to note down the day of the month on which it happened, and

see if it would be confirmed, as she confidently declared it would. Her anticipation was correct, for accounts were shortly after received that the young man was slain at the battle of Corunna, which was fought on the very day, on the night of which his mistress had beheld the vision.

This relation, which may be confidently relied upon, is one of the most striking examples of identity between the dream and the real circumstances with which I am acquainted; but it must be looked upon as merely accidental. The lady's mind was deeply interested in the fate of her lover, and full of that event which she most deeply dreaded—his death. The time of this occurrence, as coinciding with her dream, is certainly curious; but still there is nothing in it which can justify us in referring it to any other origin than chance. The following events, which occurred to myself, in August 1821, are almost equally remarkable, and are imputable to the same fortuitous cause.

I was then in Caithness, when I dreamed that a near relation of my own, residing three

hundred miles off, had suddenly died: and immediately thereafter awoke in a state of inconceivable terror, similar to that produced by a paroxysm of night-mare. The same day, happening to be writing home, I mentioned the circumstance in a half-jesting, half-earnest way. To tell the truth, I was afraid to be serious, lest I should be laughed at for putting any faith in dreams. However, in the interval between writing and receiving an answer, I remained in a state of most unpleasant suspense. I felt a presentiment that something dreadful had happened, or would happen; and although I could not help blaming myself for a childish weakness in so feeling, I was unable to get rid of the painful idea which had taken such rooted possession of my mind. Three days after sending away the letter, what was my astonishment when I received one written the day subsequent to mine, and stating that the relative of whom I had dreamed, had been struck with a fatal shock of palsy the day before—viz. the very day on the morning of which I had beheld the appearance in my dream! My friends received my letter two

days after sending their own away, and were naturally astonished at the circumstance. I may state that my relation was in perfect health before the fatal event took place. It came upon him like a thunderbolt, at a period when no one could have the slightest anticipation of danger.

The following case will interest the reader, both on its own account, and from the remarkable coincidence between the dream and the succeeding calamity; but like all other instances of the kind this also must be referred to chance:—

“Being in company the other day, when the conversation turned upon dreams, I related one, which, as it happened to my own father, I can answer for the perfect truth of it. About the year 1731, my father, Mr D. of K——, in the County of Cumberland, came to Edinburgh to attend the classes, having the advantage of an uncle in the regiment then in the Castle, and remained under the protection of his uncle and aunt, Major and Mrs Griffiths, during the winter. When spring arrived, Mr D. and three or four young

gentlemen from England, (his intimates,) made parties to visit all the neighbouring places about Edinburgh, Roslin, Arthur's Seat, Craig-Millar, &c., &c. Coming home one evening from some of those places, Mr D. said, 'We have made a party to go a-fishing to Inch-Keith to-morrow, if the morning is fine, and have bespoke our boat; we shall be off at six;' no objection being made, they separated for the night.

"Mrs Griffiths had not been long asleep, till she screamed out in the most violent agitated manner, 'The boat is sinking; save, oh, save them!' The Major awaked her, and said, 'Were you uneasy about the fishing party?'—'Oh no,' said she, 'I had not once thought of it.' She then composed herself, and soon fell asleep again: in about an hour, she cried out in a dreadful fright, 'I see the boat is going down.' The Major again awoke her, and she said, 'It has been owing to the other dream I had; for I feel no uneasiness about it.' After some conversation, they both fell sound asleep, but no rest could be obtained for her; in the most extreme agony, she again

screamed, 'They are gone; the boat is sunk!' When the Major awaked her, she said, 'Now I cannot rest; Mr D. must not go, for I feel, should he go, I would be miserable till his return; the thoughts of it would almost kill me.'

"She instantly arose, threw on her wrapping-gown, went to his bed-side, for his room was next their own, and with great difficulty she got his promise to remain at home. 'But what am I to say to my young friends whom I was to meet at Leith at six o'clock?'—'With great truth you may say your aunt is ill, for I am so at present; consider, you are an only son, under our protection, and should any thing happen to you, it would be my death.' Mr D. immediately wrote a note to his friends, saying he was prevented joining them, and sent his servant with it to Leith. The morning came in most beautifully, and continued so till three o'clock, when a violent storm arose, and in an instant the boat, and all that were in it, went to the bottom, and were never heard of, nor was any part of it ever seen."*

* "Blackwood's Edinburgh Magazine," vol. xix. p. 73.

Equally singular is the following case, from the "Memoirs of Lady Fanshawe."

"My mother being sick to death of a fever, three months after I was born, which was the occasion she gave me suck no longer, her friends and servants thought to all outward appearance she was dead, and so lay almost two days and a night; but Dr Winston coming to comfort my father, went into my mother's room, and looking earnestly on her face, said, 'She was so handsome, and now looks so lovely, I cannot think she is dead;' and suddenly took a lancet out of his pocket, and with it cut the sole of her foot, which bled. Upon this, he immediately caused her to be laid upon the bed again, and to be rubbed, and such means, as she came to life, and opening her eyes, saw two of her kinswomen stand by her, my Lady Knollys and my Lady Russell, both with great wide sleeves, as the fashion then was, and said, 'Did not you promise me fifteen years, and are you come again?' which they not understanding, persuaded her to keep her spirits quiet in that great weakness wherein she then was; but some hours after, she desired my

father and Dr Howlsworth might be left alone with her, to whom she said, 'I will acquaint you, that during the time of my trance I was in great quiet, but in a place I could neither distinguish nor describe; but the sense of leaving my girl, who is dearer to me than all my children, remained a trouble upon my spirits. Suddenly I saw two by me, clothed in long white garments, and methought I fell down upon my face upon the dust; and they asked why I was so troubled in so great happiness. I replied, O let me have the same grant given to Hezekiah, that I may live fifteen years to see my daughter a woman: to which they answered, It is done: and then, at that instant, I awoke out of my trance!' and Dr Howlsworth did there affirm, that that day she died made just fifteen years from that time."

A sufficiently striking instance of such coincidence occurs in the case of Dr Donne, the metaphysical poet; but I believe that, in this case, it was a spectral illusion rather than a common dream. Two days after he had arrived in Paris, he was left alone in a room

where he had been dining with Sir Robert Drury and a few companions. "Sir Robert returned about an hour afterwards. He found his friend in a state of ecstasy, and so altered in his countenance, that he could not look upon him without amazement. The doctor was not able for some time to answer the question, *what had befallen him?*—but after a long and perplexed pause, at last said, 'I have seen a dreadful vision since I saw you;—I have seen my dear wife pass twice by me through this room, with her hair hanging about her shoulders, and a dead child in her arms. This I have seen since I saw you.' To which Sir Robert answered, 'Sure, Sir, you have slept since I went out; and this is the result of some melancholy dream, which I desire you to forget, for you are now awake.' Donne replied, 'I cannot be more sure that I now live, than that I have not slept since I saw you; and am as sure that at her second appearing she stopped, looked me in the face and vanished.'**

* Hibbert's *Philosophy of Apparitions*, p. 354.

It is certainly very curious that Mrs Donne, who was then in England, was at that time sick in bed, and had been delivered of a dead child, on the same day, and about the same hour, that the vision occurred. There were distressing circumstances in the marriage of Dr Donne which account for his mind being strongly impressed with the image of his wife, to whom he was exceedingly attached; but these do not render the coincidence above related less remarkable.

I do not doubt that the apparition of Julius Cæsar, which appeared to Brutus, and declared it would meet him at Philippi, was either a dream or a spectral illusion—probably the latter. Brutus, in all likelihood, had some idea that the battle which was to decide his fate would be fought at Philippi: probably it was a good military position, which he had fixed upon as a fit place to make a final stand; and he had done enough to Cæsar to account for his own mind being painfully and constantly engrossed with the image of the assassinated Dictator. Hence the verification of this sup-

posed warning—hence the easy explanation of a supposed supernatural event.

At Newark-upon-Trent, a curious custom, founded upon the preservation of Alderman Clay and his family by a dream, has prevailed since the days of Cromwell. On the 11th March, every year, penny-loaves are given away to any one who chooses to appear at the Town Hall and apply for them, in commemoration of the Alderman's deliverance, during the siege of Newark by the Parliamentary forces. This gentleman, by will, dated 11th December, 1694, gave to the Mayor and Aldermen one hundred pounds, the interest of which was to be given to the Vicar yearly, on condition of his preaching an annual sermon. Another hundred pounds were also appropriated for the behoof of the poor, in the way above-mentioned. The origin of this bequest is singular. During the bombardment of Newark by Oliver Cromwell's forces, the Alderman dreamed three nights successively that his house had taken fire, which produced such a vivid impression upon his mind, that he and his family left it: and

in a few days the circumstances of his vision actually took place, by the house being burned down by the besiegers.

Dr Abercrombie relates the case of a gentleman in Edinburgh, who was affected with an aneurism of the popliteal artery, for which he was under the care of two eminent surgeons. About two days before the time appointed for the operation, his wife dreamed that a change had taken place in the disease, in consequence of which an operation would not be required. "On examining the tumour in the morning, the gentleman was astonished to find that the pulsation had entirely ceased; and, in short, this turned out to be a spontaneous cure. To persons not professional, it may be right to mention that the cure of popliteal aneurism, without an operation, is a very uncommon occurrence, not happening, perhaps, in one out of numerous instances, and never to be looked upon as probable in any individual case. It is likely, however, that the lady had heard of the possibility of such a termination, and that her anxiety had very naturally embodied this into a dream: the fulfilment of it,

at the very time when the event took place, is certainly a very remarkable coincidence.*

Persons are said to have had the period of their own death pointed out to them in dreams. I have often heard the case of the late Mr M. of D—— related in support of this statement. It is certainly worth telling, not on account of any supernatural character belonging to it, but simply from the extraordinary coincidence between the dream and the subsequent event. This gentleman dreamed one night that he was out riding, when he stopped at an inn on the road-side for refreshment, where he saw several people whom he had known some years before, but who were all dead. He was received kindly by them, and desired to sit down and drink, which he accordingly did. On quitting this strange company, they exacted a promise from him that he would visit them that day six weeks. This he promised faithfully to do; and, bidding them farewell, he rode homewards. Such was the substance of his dream, which he related in a jocular

* *Abercrombie's Inquiries concerning the Intellectual Powers*, p. 262, 1st edit.

way to his friends, but thought no more about it, for he was a person above all kind of superstition. The event, however, was certainly curious enough, as well as melancholy; for on that very day six weeks on which he had engaged to meet his friends at the inn, he was killed in attempting to spring his horse over a five-barred gate. The famous case of Lord Lyttleton* is also cited as an example of a similar kind, but with less show of reason, for this case is now very generally supposed to be an imposition; and so will almost every other of the same kind, if narrowly investigated. At the same time, I do not mean to doubt that such an event, foretold in a dream, may occa-

* "Of late it has been said and published, that the unfortunate nobleman had previously determined to take poison, and of course, had it in his own power to ascertain the execution of the prediction. It was, no doubt, singular that a man, who meditated his exit from the world, should have chosen to play such a trick upon his friends. But it is still more credible that a whimsical man should do so wild a thing, than that a messenger should be sent from the dead to tell a libertine at what precise hour he should expire."—*Scott's Letters on Demonology*, p. 361.

sionally come to pass; but I would refer the whole to fortuitous coincidence. Men dream, every now and then, that they will die on a certain day, yet how seldom do we see those predictions fulfilled by the result! In very delicate people, indeed, such a visionary communication, by acting fatally upon the mind, might be the means of occasioning its own fulfilment. In such cases, it has been customary for the friends of the individual to put back the clock an hour or two, so as to let the fatal period pass by without his being aware of it; and as soon as it was fairly passed, to inform him of the circumstance, and laugh him out of his apprehension.

There is another way in which the apparent fulfilment of a dream may be brought about. A good illustration in point is given by Mr Combe. The subject of it was one Scott, executed in 1823, at Jedburgh, for murder. "It is stated in his life, that, some years before the fatal event, he had dreamed that he had committed a murder, and was greatly impressed with the idea. He frequently spoke of it, and recurred to it as something ominous,

till at last it was realized. The organ of *Destructiveness* was large in his head, and so active that he was an enthusiast in poaching, and prone to outrage and violence in his habitual conduct. This activity of the organ might take place during sleep, and then it would inspire his mind with destructive feelings, and the dream of murder would be the consequence. From the great natural strength of the propensity, he probably may have felt, when awake, an inward tendency to this crime; and joining this and the dream together, we can easily account for the strong impression left by the latter on his mind.**

One method in which death may appear to be foretold is, by the accession of frightful visions immediately before fatal illnesses. This, however, goes for nothing in the way of argument, for it was the state of the system shortly before the attack of disease which induced such dreams. According to Silimachus, the epidemic fever which prevailed at Rome was ushered in by attacks of night-mare; and

* Combe's System of Phrenology, p. 511, 3d edit.

Sylvius Deleboe, who describes the epidemic which raged at Leyden in 1669, states that previous to each paroxysm of the fever, the patient fell asleep, and suffered a severe attack of night-mare. The vulgar belief, therefore, that unpleasant dreams are ominous of death, is not destitute of foundation; but the cause why they should be so is perfectly natural. It is the incipient disease which produces the dreams, and the fatal event which often follows, is a natural consequence of that disease.

It is undoubtedly owing to the faculty possessed by sleep, of renewing long-forgotten ideas, that persons have had important facts communicated to them in dreams. There have been instances, for example, where valuable documents, sums of money, &c., have been concealed, and where either the person who secreted them, or he who had the place of their concealment communicated to him, may have forgotten every thing therewith connected. He may then torture his mind in vain, during the waking state, to recollect the event; and it may be brought to his re-

membrane, at once, in a dream. In such cases an apparition is generally the medium through which the seemingly mysterious knowledge is communicated. The imagination conjures up some phantom that discloses the secret; which circumstance, proceeding, in reality, from a simple operation of the mind, is straightway converted into something supernatural, and invested with all the attributes of wonder and awe. When such spectral forms appear, and communicate some fact which turns out to be founded on truth, the person is not always aware that the whole occurred in a dream, but often fancies that he was broad awake when the apparition appeared to him and communicated the particular intelligence. When we hear, therefore, of hidden treasures, wills, &c., being disclosed in such a manner, we are not always to scout the report as false. The spectre divulging the intelligence was certainly the mere chimera of the dreamer's brain, but the facts revealed, apparently by this phantom, may, from the above circumstance, be substantially true. The following curious case is strikingly in point, and is given by Sir

Walter Scott in his notes to the new edition of "The Antiquary."

"Mr R——d of Bowland, a gentleman of landed property in the Vale of Gala, was prosecuted for a very considerable sum, the accumulated arrears of teind, (or tithe,) for which he was said to be indebted to a noble family, the titulars, (lay impropiators of the tithes.) Mr R——d was strongly impressed with the belief that his father had, by a form of process peculiar to the law of Scotland, purchased these lands from the titular, and, therefore, that the present prosecution was groundless. But after an industrious search among his father's papers, an investigation of the public records, and a careful inquiry among all persons who had transacted law business for his father, no evidence could be recovered to support his defence. The period was now near at hand when he conceived the loss of his law-suit to be inevitable, and he had formed the determination to ride to Edinburgh next day, and make the best bargain he could in the way of compromise. He went to bed with this resolution, and, with all the circum-

stances of the case floating upon his mind, had a dream to the following purpose. His father, who had been many years dead, appeared to him, he thought, and asked him why he was disturbed in his mind. In dreams, men are not surprised at such apparitions. Mr R——d thought that he informed his father of the cause of his distress, adding, that the payment of a considerable sum of money was the more unpleasant to him, because he had a strong consciousness that it was not due, though he was unable to recover any evidence in support of his belief. ‘You are right, my son,’ replied the paternal shade; ‘I did acquire right to these teinds, for payment of which you are now prosecuted. The papers relating to the transaction are in the hands of Mr ——, a writer, (or attorney,) who is now retired from professional business, and resides at Inveresk, near Edinburgh. He was a person whom I employed on that occasion for a particular reason, but who never on any other occasion transacted business on my account. It is very possible,’ pursued the vision, ‘that Mr ——, may have forgotten a matter which

is now of a very old date; but you may call it to his recollection by this token, that when I came to pay his account, there was difficulty in getting change for a Portugal piece of gold, and we were forced to drink out the balance at a tavern.'

"Mr R——d awoke in the morning with all the words of the vision imprinted on his mind, and thought it worth while to walk across the country to Inveresk, instead of going straight to Edinburgh. When he came there, he waited on the gentleman mentioned in the dream, a very old man. Without saying any thing of the vision he inquired whether he remembered having conducted such a matter for his deceased father. The old gentleman could not at first bring the circumstance to his recollection, but on mention of the Portugal piece of gold, the whole returned upon his memory; he made an immediate search for the papers and recovered them—so that Mr R——d carried to Edinburgh the documents necessary to gain the cause which ne was on the verge of losing.

"The author has often heard this story

told by persons who had the best access to know the facts, who were not likely themselves to be deceived, and were certainly incapable of deception. He cannot, therefore, refuse to give it credit, however extraordinary the circumstances may appear. The circumstantial character of the information given in the dream, takes it out of the general class of impressions of the kind, which are occasioned by the fortuitous coincidence of actual events with our sleeping thoughts. On the other hand, few will suppose that the laws of nature were suspended, and a special communication from the dead to the living permitted, for the purpose of saving Mr R——d a certain number of hundred pounds. The author's theory is, that the dream was only the recapitulation of information which Mr R——d had really received from his father while in life, but which at first he merely recalled as a general impression that the claim was settled. It is not uncommon for persons to recover, during sleep, the thread of ideas which they have lost during their waking hours. It may be added, that this remarkable circumstance was attended

with bad consequences to Mr R——d; whose health and spirits were afterwards impaired, by the attention which he thought himself obliged to pay to the visions of the night.” This result is a melancholy proof of the effect sometimes produced by ignorance of natural laws. Had Mr R——d been acquainted with the nature of the brain, and of the manner in which it is affected in sleep, the circumstance above related would have given him no annoyance. He would have traced the whole chain of events to their true source; but being ignorant of this, he became the victim of superstition, and his life was rendered miserable.

CHAPTER V.

NIGHT-MARE.

NIGHT-MARE may be defined a painful dream, accompanied with difficult respiratory action, and a torpor in the powers of volition. The reflecting organs are generally more or less awake; and, in this respect, night-mare differs from simple dreaming, where they are mostly quiescent.

This affection, the *EPHIALTES* of the Greeks, and *INCUBUS* of the Romans, is one of the most distressing to which human nature is subject. Imagination cannot conceive the horrors it frequently gives rise to, or language describe them in adequate terms. They are a thousand times more frightful than the visions conjured up by necromancy or *diablerie*;

and far transcend every thing in history or romance, from the fable of the writhing and asp-encircled Laocoon to Dante's appalling picture of Ugolino and his famished offspring, or the hidden tortures of the Spanish Inquisition. The whole mind, during the paroxysm, is wrought up to a pitch of unutterable despair: a spell is laid upon the faculties, which freezes them into inaction; and the wretched victim feels as if pent alive in his coffin, or overpowered by resistless and immitigable pressure.

The modifications which night-mare assumes are infinite; but one passion is almost never absent—that of utter and incomprehensible dread. Sometimes the sufferer is buried beneath overwhelming rocks, which crush him on all sides, but still leave him with a miserable consciousness of his situation. Sometimes he is involved in the coils of a horrid, slimy monster, whose eyes have the phosphorescent glare of the sepulchre, and whose breath is poisonous as the marsh of Lerna. Every thing horrible, disgusting, or terrific in the physical or moral world, is brought before

him in fearful array; he is hissed at by serpents, tortured by demons, stunned by the hollow voices and cold touch of apparitions. A mighty stone is laid upon his breast, and crushes him to the ground in helpless agony: mad bulls and tigers pursue his palsied footsteps: the unearthly shrieks and gibberish of hags, witches, and fiends float around him. In whatever situation he may be placed, he feels superlatively wretched; he is Ixion working for ages at his wheel: he is Sisyphus rolling his eternal stone: he is stretched upon the iron bed of Procrustes: he is prostrated by inevitable destiny beneath the approaching wheels of the car of Juggernaut. At one moment, he may have the consciousness of a malignant demon being at his side: then, to shun the sight of so appalling an object, he will close his eyes, but still the fearful being makes its presence known; for its icy breath is felt diffusing itself over his visage, and he knows that he is face to face with a fiend. Then, if he look up, he beholds horrid eyes glaring upon him, and an aspect of hell grinning at him with even more than hellish

malice. Or, he may have the idea of a monstrous hag squatted upon his breast—mute, motionless, and malignant; an incarnation of the Evil Spirit—whose intolerable weight crushes the breath out of his body, and whose fixed, deadly incessant stare petrifies him with horror and makes his very existence insufferable.

In every instance, there is a sense of oppression and helplessness; and the extent to which these are carried, varies according to the violence of the paroxysm. The individual never feels himself a free agent; on the contrary, he is spell-bound by some enchantment, and remains an unresisting victim for malice to work its will upon. He can neither breathe, nor walk, nor run with his wonted facility. If pursued by any imminent danger, he can hardly drag one limb after another; if engaged in combat, his blows are utterly ineffective; if involved in the fangs of any animal, or in the grasp of an enemy, extrication is impossible. He struggles, he pants, he toils, but it is all in vain: his muscles are rebels to the will, and refuse to obey its calls. In no case is there a

sense of complete freedom: the benumbing stupor never departs from him; and his whole being is locked up in one mighty spasm. Sometimes he is forcing himself through an aperture too small for the reception of his body, and is there arrested and tortured by the pangs of suffocation produced by the pressure to which he is exposed; or he loses his way in a narrow labyrinth, and gets involved in its contracted and inextricable mazes; or he is entombed alive in a sepulchre beside the mouldering dead. There is, in most cases, an intense reality in all that he sees, or hears, or feels. The aspects of the hideous phantoms which harass his imagination are bold and defined; the sounds which greet his ear appallingly distinct; and when any dimness or confusion of imagery does prevail, it is of the most fearful kind, leaving nothing but dreary and miserable impressions behind it.

Much of the horror experienced in nightmare will depend upon the natural activity of the imagination, upon the condition of the body, and upon the state of mental exertion before going to sleep. If, for instance, we

have been engaged in the perusal of such works as "The Monk," "The Mysteries of Udolpho," or "Satan's Invisible World Discovered;" and if an attack of night-mare should supervene, it will be aggravated into seven-fold horror by the spectral phantoms with which our minds have been thereby filled. We will enter into all the fearful mysteries of these writings, which, instead of being mitigated by slumber, acquire an intensity which they never could have possessed in the waking state. The apparitions of murdered victims, like the form of Banquo, which wrung the guilty conscience of Macbeth, will stalk before us; we are surrounded by sheeted ghosts, which glare upon us with their cold sepulchral eyes; our habitation is among the vaults of ancient cathedrals, or among the dungeons of ruined monasteries, and our companions are the dead.

At other times, an association of ludicrous images passes through the mind: every thing becomes incongruous, ridiculous, and absurd. But even in the midst of such preposterous fancies, the passion of mirth is never for one

moment excited: the same blank despair, the same freezing *inertia*, the same stifling torture, still harass us; and so far from being amused by the laughable drama enacting before us, we behold it with sensations of undefined horror and disgust.

In general, during an attack, the person has the consciousness of an utter inability to express his horror by cries. He feels that his voice is half choked by impending suffocation, and that any exertion of it, farther than a deep sigh or groan, is impossible. Sometimes, however, he conceives that he is bellowing with prodigious energy, and wonders that the household are not alarmed by his noise. But this is an illusion: those outcries which he fancies himself uttering, are merely obscure moans, forced with difficulty and pain from the stifled penetralia of his bosom.

Night-mare takes place under various circumstances. Sometimes, from a state of perfect sleep, we glide into it, and feel ourselves unconsciously overtaken by its attendant horrors: at other times, we experience it stealing upon us like a thief at a period when we are

all but awake, and aware of its approach. We have then our senses about us, only, perhaps, a little deadened and confused by incipient slumber; and we feel the gradual advance of the fiend, without arousing ourselves, and scaring him away, although we appear to possess the full ability of doing so. Some persons, immediately previous to an attack, have sensations of vertigo and ringing in the ears.

At one time, night-mare melts into unbroken sleep, or pleasing dreams; and we awake in the morning with merely the remembrance of having had one of its attacks: at another, it arouses us by its violence, and we start out of it with a convulsive shudder. At the moment of throwing off the fit, we seem to turn round upon the side with a mighty effort, as if from beneath the pressure of a superincumbent weight; and, the more thoroughly to awake ourselves, we generally kick violently, beat the breast, rise up in bed, and cry out once or twice. As soon as we are able to exercise the voice or voluntary muscles with freedom, the paroxysm is at an end; but, for

some time after, we experience extreme terror, and often cold shivering, while the heart throbs violently, and the respiration is hurried. These two latter circumstances are doubted by Dr Darwin, but I am convinced of their existence, both from what I have experienced in my own person, and from what I have been told by others: indeed, analogy would irresistibly lead us to conclude that they must exist; and whoever carefully investigates the subject, will find that they do almost universally.

An opinion prevails, that during incubus the person is always upon his back; and the circumstance of his usually feeling as if in that posture, together with the relief which he experiences on turning round upon his side, are certainly strong presumptions in favour of its accuracy. The sensations, however, which occur, in this state, are fallacious in the highest degree. We have seldom any evidence either that he was on his back, or that he turned round at all. The fact that he supposed himself in the above position during the fit, and the other fact, that, on recovering from it, he was lying on his side, may have produced the

illusion; and, where he never moved a single muscle, he may conceive that he turned round after a prodigious effort. I have had an attack of this disorder while sitting in an arm-chair, or with my head leaning against a table. In fact, these are the most likely positions to bring it on, the lungs being then more completely compressed than in almost any other posture. I have also had it most distinctly while lying on the side, and I know many cases of a similar description in others. Although, therefore, night-mare may take place more frequently upon the back than upon the side, the opinion that it occurs only in the former of these postures, is altogether incorrect; and where we are very liable to its attacks, no posture whatever will protect us.

Persons not particularly subject to incubus, feel no inconvenience, save temporary terror or fatigue, from any occasional attack which they may have; but those with whom it is habitual, are apt to experience a certain degree of giddiness, ringing in the ears, tension in the forehead, flashing of light before the eyes, and other symptoms of cerebral conges-

tion. A bad taste in the mouth, and more or less fulness about the pit of the stomach, are sometimes experienced after an attack.

The illusions which occur, are perhaps the most extraordinary phenomena of night-mare; and so strongly are they often impressed upon the mind, that even on awaking, we find it impossible not to believe them real. We may, for example, be sensible of knockings at the door of our apartment, hear familiar voices calling upon us, and see individuals passing through the chamber. In many cases, no arguments, no efforts of the understanding will convince us that these are merely the chimeras of sleep. We regard them as events of actual occurrence, and will not be persuaded to the contrary. With some, such a belief has gone down to the grave: and others have maintained it strenuously for years, till a recurrence of the illusions, under circumstances which rendered their real existence impossible, has shown them that the whole was a dream. Many a good ghost story has had its source in the illusions of night-mare.

The following case, related by Mr Waller,

gives a good idea of the strength of such illusive feelings:—

“In the month of February, 1814, I was living in the same house with a young gentleman, the son of a peer of the United Kingdom, who was at that time under my care, in a very alarming state of health; and who had been, for several days, in a state of violent delirium. The close attention which his case required from me, together with a degree of personal attachment to him, had rendered me extremely anxious about him; and as my usual hours of sleep suffered a great degree of interruption from the attendance given to him, I was, from that cause alone, rendered more than usually liable to the attacks of night-mare, which consequently intruded itself every night upon my slumbers. The young gentleman in question, from the violence of his delirium, was with great difficulty kept in bed; and had once or twice eluded the vigilance of his attendants, and jumped out of bed; an accident of which I was every moment dreading a repetition. I awoke from my sleep one morning about four o'clock—at least it appeared to me

that I awoke—and heard distinctly the voice of this young gentleman, who seemed to be coming hastily up the stairs leading to my apartment, calling me by name, in the manner he was accustomed to do in his delirium: and immediately after, I saw him standing by my bed-side, holding the curtains open, expressing all that wildness in his looks which accompanies violent delirium. At the same moment, I heard the voices of his two attendants coming up the stairs in search of him, who likewise came into the room and took him away. During all this scene I was attempting to speak, but could not articulate: I thought however, that I succeeded in attempting to get out of bed, and assisting his attendants in removing him out of the room; after which, I returned to bed, and instantly fell asleep. When I waited upon my patient in the morning, I was not a little surprised to find that he was asleep; and was utterly confounded on being told that he had been so all night; and as this sleep was the first he had enjoyed for three or four days, the attendants were very minute in detailing the whole particulars of

it. Although this account appeared inconsistent with what I conceived I had seen, and with what I concluded they knew as well as myself, I did not, for some time, perceive the error into which I had been led, till I observed that some of my questions and remarks were not intelligible; then I began to suspect the true source of the error, which I should never have discovered, had not experience rendered those hallucinations familiar to me. But the whole of this transaction had so much consistency and probability in it, that I might, under different circumstances, have remained for ever ignorant of having been imposed upon in this instance, by my senses."*

During night-mare, the deepness of the slumber varies much at different times. Sometimes we are in a state closely approximating upon perfect sleep; at other times we are almost completely awake; and it will be remarked, that the more awake we are, the greater is the violence of the paroxysm. I have experienced the affection stealing upon me while in perfect

* Waller's Treatise.

possession of my faculties, and have undergone the greatest tortures, being haunted by spectres, hags, and every sort of phantom—having, at the same time, a full consciousness that I was labouring under incubus, and that all the terrifying objects around me were the creations of my own brain. This shows that the judgment is often only very partially affected, and proves also that night-mare is not merely a disagreeable dream, but a painful bodily affection. Were it nothing more than the former, we could scarcely possess a knowledge of our condition; for in simple visions, the reflecting organs are almost uniformly quiescent, and we scarcely ever, for a moment, doubt the reality of our impressions. In night-mare, this is often, perhaps generally, the case; but we frequently meet with instances, in which, during the worst periods of the fit, consciousness remains almost unimpaired.

There are great differences in the duration of the paroxysm, and also in the facility with which it is broken. I know not of any method by which the period to which it extends can be estimated, for the sufferer has no data to

go by, and time, as in all modifications of dreaming, is subjected to the most capricious laws—an actual minute often appearing to embrace a whole hour. Of this point, therefore, we must be contented to remain in ignorance; but it may be conceived that the attack will be as various in its duration, as in the characters which it assumes—in one case being ten times as long as in another. With regard to the breaking of the fit, the differences are equally great. At one time, the slightest agitation of the body, the opening of the chamber door, or calling softly to the sufferer, will arouse him; at another, he requires to be shaken violently, and called upon, long and loudly, before he is released.

Some people are much more prone to incubus than others. Those whose digestion is healthy, whose minds are at ease, and who go supperless to bed, will seldom be troubled with it. Those, again, who keep late hours, study hard, eat heavy suppers, and are subject to bile, acid, or hypochondria, are almost sure to be, more or less, its victims. There are particular kinds of food, which pretty constantly

lead to the same result, such as cheese, cucumbers, almonds, and whatever is hard to be digested. Hildesheim, in his "De Affectibus Capitis," justly remarks that "he who wishes to know what night-mare is, let him eat chestnuts before going to sleep, and drink feculent wine after them."

Certain diseases, also, are apt to induce it, such as asthma, hydrothorax, angina pectoris, and other varieties of dyspnoea. Men are more subject to it than women, probably from their stomachs being more frequently disordered by intemperance, and their minds more closely occupied. Sailors, owing to the hard and indigestible nature of their food, are very frequently its victims; and it is a general remark that it oftener occurs at sea than on shore. It seems probable that much of the superstitious belief of these men, in apparitions, proceeds from the phantoms which night-mare calls into existence. Unmarried women are more annoyed by it than those who are married; and the latter, when pregnant, have it oftener than at other times. Persons who were extremely subject to the complaint in

their youth, sometimes get rid of it when they reach the age of puberty, owing, probably, to some change in the constitution which occurs at this period.

There have been different opinions with regard to the proximate cause of incubus; and authors have generally looked upon it as involved in considerable obscurity. An impeded circulation of blood in the pulmonary arteries, compression of the diaphragm by a full stomach, and torpor of the intercostal muscles, are all mentioned as contributing wholly, or partially, to the event. I am of opinion that either of these states may cause night-mare, but that, in most cases, they are all combined. Any thing in fact, which impedes respiration, may give rise to the disorder, whether it be asthma, hydrothorax, distended stomach, muscular torpor, or external compression. The causes, then, are various, but it will be found that, whatever they may be, their ultimate operation is upon the lungs.

We have already seen that, in ordinary sleep, particular states of the body are apt to induce visions: it is, therefore, easily conceiv-

able that a sense of suffocation, such as occurs in night-mare, may give birth to all the horrid phantoms seen in that distemper. The physical suffering in such a case, exalts the imagination to its utmost pitch; fills it with spectres and chimeras; and plants an immovable weight or malignant fiend upon the bosom to crush us into agony. Let us see how such physical suffering is brought about.

Any disordered state of the stomach may produce it. First.—This organ may be so distended with food or wind as to press upon the diaphragm, lessen the dimensions of the chest, obstruct the movements of the heart, and thereby impede respiration. Circumstances like these alone are sufficient to produce night-mare; and the cause from the first is purely mechanical.

Secondly.—The state of the stomach may call forth incubus by means more circuitous or indirect. In this case, the viscus is unequal to the task imposed upon it of digesting the food, either from an unusual quantity being thrown upon it, from the food being of an indigestible nature, or from actual weakness.

Here the sensorial power latent in this organ is insufficient to carry it through with its operations, and it is obliged to draw upon the rest of the body—upon the brain, the respiratory muscles, &c., for the supply of which it is deficient. The muscles of respiration, in giving their portion, reduce themselves to a state of temporary debility, and do not retain a sufficient share to execute their own actions with due vigour. The pectorals, the intercostals, and the diaphragm become thus paralyzed; and, the chest not being sufficiently dilated for perfect breathing, a feeling of suffocation inevitably ensues. In like manner, the muscles of volition, rendered inert by the subtraction of their quota of sensorial power, are unable to exercise their functions, and remain, during the paroxysm, in a state of immovable torpor. This unequal distribution of nervous energy continues till, by producing some excessive uneasiness, it stimulates the will to a violent effort, and breaks the fit; and so soon as this takes place, the balance becomes redressed, and the sensorial equilibrium restored.

Physical suffering of that kind which impedes breathing, may also be occasioned by many other causes—by pneumonia, by empyema, by aneurism of the aorta, by laryngitis, by croup, by external pressure; and accordingly, either of these may give rise to night-mare. If we chance to lie down with a pillow or heavy cloak upon the breast, or to sleep with the body bent forward, and the head supported upon a table, as already mentioned, we may be seized with it; and, in truth, whatever, either directly or indirectly, acts upon the respiratory muscles, and impedes their operation, is pretty sure to bring it on. Even a weak or disordered stomach, in which there is no food, by attracting to itself a portion of their sensorial power to aid its own inadequacies, may induce it. The disorder therefore, takes place under various circumstances—either by direct pressure upon the lungs, as in distended stomach, or hydrothorax; or by partial torpor of the stomach or muscles of respiration, owing to a deficiency of nervous energy. These physical impediments co-existing with, or giving rise to a dis-

tempered state of the brain, sufficiently account for the horrors of night-mare.

Why are hard students, deep thinkers, and hypochondriacs unusually subject to incubus? The cause is obvious. Such individuals have often a bad digestion: their stomachs are subject to acidity, and other functional derangements, and, therefore, peculiarly apt to generate the complaint. The sedentary life, and habits of intellectual or melancholy reflection in which they indulge, have a tendency not merely to disturb the digestive apparatus, but to act upon the whole cerebral system: hence, they are far more liable to dreams of every kind than other people, in so far as their minds are more intently employed; and when, in sleep, they are pained by any physical endurance, the activity of their mental powers will naturally associate the most horrible ideas with such suffering, and produce incubus, and all its frightful accompaniments.

Night-mare is sometimes attended with danger, when it becomes habitual. It may then give rise to apoplexy, and destroy life; or in very nervous subjects, may occasion

epileptic and hysterical affections, which prove extremely harassing. According to Cœlius Aurelianus many people die of this complaint. Probably, some of those who are found dead in bed have lost their lives in a fit of incubus, the circumstance being imputed to some other cause. Night-mare is thus, in some cases dangerous; and in all, when it becomes habitual, is such a source of misery, that sleep, instead of being courted as a period of blissful repose, is looked upon with horror, as the appointed season of inexpressible suffering and dread. It becomes, on this account, a matter of importance to contrive some method for preventing the attacks of so distressful a malady. The cause, whatever it may be, must, if practicable, be removed, and the symptoms thence arising will naturally disappear. If the disorder proceed from heavy suppers, or indigestible food, these things ought to be given up, and the person should either go supperless to bed, or with such a light meal as will not hurt his digestion. Salted provisions of all kinds must be abandoned, nor should he taste any thing which will lie heavily upon the

stomach, or run into fermentation. For this reason, nuts, cucumbers, cheese, ham, and fruits are all prejudicial. If he be subject to heartburn, flatulence, and other dyspeptic symptoms, he should make use of occasional doses of magnesia, or carbonate of potash or soda. I have known a tea-spoonful of either of the two latter, or three times that quantity of the former, taken before stepping into bed, prevent an attack, where, from the previous state of the stomach I am convinced it would have taken place, had those medicines not been used. Great attention must be paid to the state of the bowels. For this purpose, the colocynth, the compound rhubarb, or the common aloetic pill, should be made use of, in doses of one, two, or three, according to circumstances, till the digestive organs are brought into proper play. The common blue pill, used with proper caution, is also an excellent medicine. In all cases, the patient should take abundant exercise, shun late hours, or too much study, and keep his mind in as cheerful a state as possible. The bed he lies on ought to be hard, and the pillow

not very high. When the attacks are frequent, and extremely severe, Dr Darwin recommends that an alarm clock might be hung up in the room, so that the repose may be interrupted at short intervals. It is a good plan to have another person to sleep in the same bed, who might arouse him from the paroxysm; and he should be directed to lie as little as possible upon the back.

These points comprehend the principal treatment, and when persevered in, will rarely fail to mitigate or remove the disease. Sometimes, however, owing to certain peculiarities of constitution, it may be necessary to adopt a different plan, or combine other means along with the above: thus, Whytt, who was subject to night-mare, could only insure himself against an attack, by taking a small glassful of brandy just before going to bed; and some individuals find that a light supper prevents the fit, while it is sure to occur if no supper at all be taken. But there are rare exceptions to the general rule, and, when they do occur, must be treated in that manner which experience proves most effectual,

without being bound too nicely by the ordinary modes of cure. Blood-letting, which some writers recommend, is useless or hurtful, except in cases where there is reason to suppose that the affection is brought on by plethora. With regard to the other causes of night-mare, such as asthma, hydrothorax, &c., these must be treated on general principles, and it, as one of their symptoms, will depart so soon as they are removed.

Some persons recommend opium for the cure of night-mare, but this medicine I should think more likely to aggravate than relieve the complaint. The late Dr Polydori, author of "The Vampyre," and of an "Essay on Positive Pleasure," was much subject to incubus, and in the habit of using opium for its removal. One morning he was found dead, and on a table beside him stood a glass, which had evidently contained laudanum and water. From this it was supposed he had killed himself by his own treatment; but whether the quantity of laudanum taken by him would have destroyed life in ordinary circumstances, has never been ascertained.

CHAPTER VI.

DAY-MARE.

I HAVE strong doubts as to the propriety of considering this affection in any way different from the incubus, or night-mare. It seems merely a modification of the latter, only accompanied by no aberration of the judgment. The person endures precisely many of the same feelings, such as difficult respiration, torpor of the voluntary muscles, deep sighing, extreme terror, and inability to speak. The only difference which seems to exist between the two states is, that, in day-mare, the reason is *always* unclouded—whereas in incubus it is *generally* more or less disturbed.

Dr Mason Good, in his "Study of Medicine,"

takes notice of a case, recorded by Forestus, where the affection returned periodically every third day, like an intermittent fever. "The patient was a girl, nine years of age, and at these times was suddenly attacked with great terror, a constriction of both the lower and upper belly, with urgent difficulty of breathing. Her eyes continued open, and were permanently continued to one spot; with her hands she forcibly grasped hold of things, that she might breathe the more easily. When spoken to, she returned no answer. In the meantime, the mind seemed to be collected; she was without sleep; sighed repeatedly; the abdomen was elevated, the thorax still violently contracted, and oppressed with laborious respiration and heavy panting: she was incapable of utterance."

During the intensely hot summer of 1825, I experienced an attack of day-mare. Immediately after dining, I threw myself on my back upon a sofa, and, before I was aware, was seized with difficult respiration, extreme dread, and utter incapability of

motion or speech. I could neither move nor cry, while the breath came from my chest in broken and suffocating paroxysms. During all this time, I was perfectly awake; I saw the light glaring in at the windows in broad sultry streams; I felt the intense heat of the day pervading my frame; and heard distinctly the different noises in the street, and even the ticking of my own watch, which I had placed on the cushion beside me. I had, at the same time, the consciousness of flies buzzing around, and settling with annoying pertinacity upon my face. During the whole fit, judgment was never for a moment suspended. I felt assured that I laboured under a species of incubus. I even endeavoured to reason myself out of the feeling of dread which filled my mind, and longed with insufferable ardour for some one to open the door, and dissolve the spell which bound me in its fetters. The fit did not continue above five minutes: by degrees I recovered the use of speech and motion; and as soon as they were so far restored as to enable

me to call out and move my limbs, it wore insensibly away.

Upon the whole, I consider day-mare and night-mare identical. They proceed from the same causes and must be treated in a similar manner.

CHAPTER VII.

SLEEP-WALKING.

IN simple dreaming, as I have already stated, some of the cerebral organs are awake, while others continue in the quiescence of sleep. Such, also, is the case in somnambulism, but with this addition, that the dream is of so forcible a nature as to stimulate into action the muscular system as well as, in most cases, one or more of the organs of the senses. If we dream that we are walking, and the vision possesses such a degree of vividness and exciting energy as to arouse the muscles of locomotion, we naturally get up and walk. Should we dream that we hear or see, and the impression be so vivid as to stimulate the eyes and ears, or more properly speaking, those

parts of the brain which take cognizance of sights and sounds, then we both see any objects, or hear any sounds, which may occur, just as if we were awake. In some cases, the muscles only are excited, and then we simply walk, without either seeing or hearing. In others, both the muscles and organs of sight are stimulated, and we not only walk but have the use of our eyes. In a third variety, the activity of hearing is added, and we both walk, and see, and hear. Should the senses of smell, taste, and touch, be stimulated, into activity, and relieved from the torpor into which they were thrown by sleep, we have them also brought into operation. If to all this, we add an active state of the organs of speech, inducing us to talk, we are then brought as nearly, as the slumbering state admits, into the condition of perfect wakefulness. The following passage from Dr Mason Good, will illustrate some of the foregoing points more fully.

“If,” observes he, “the external organ of sense thus stimulated be that of sight, the dreamer may perceive objects around him, and

be able to distinguish them : and if the tenor of the dreaming ideas should as powerfully operate upon the muscles of locomotion, these also may be thrown into their accustomed state of action, and he may rise from his bed, and make his way to whatever place the drift of his dream may direct him, with perfect ease, and free from danger. He will see more or less distinctly, in proportion as the organ of sight is more or less awake : yet, from the increased exhaustion, and of course, increased torpor of the other organs, in consequence of an increased demand of sensorial power from the common stock, to supply the action of the sense and muscles immediately engaged, every other sense will probably be thrown into a deeper sleep or torpor than if the whole had been quiescent. Hence, the ears may not be roused even by a sound that might otherwise awake the sleeper. He may be insensible not only to a slight touch, but a severe shaking of the limbs ; and may even cough violently, without being recalled from his dream. Having accomplished the object of his visionary pursuit, he may safely return, even over the most

dangerous precipices—for he sees them distinctly—to his bed; and the organ of sight being now quite exhausted, or there being no longer any occasion for its use, it may once more associate in the general inactivity, and the dream take a new turn, and consist of a new combination of images.”*

I suspect that sleep-walking is sometimes hereditary, at least I have known instances which gave countenance to such a supposition. Its victims are generally pale, nervous, irritable persons; and it is remarked that they are subject, without any apparent cause, to frequent attacks of cold perspiration. Somnambulism, I have had occasion to remark, is very common among children; and I believe that it more frequently affects childhood than any other age. In females, it sometimes arises from amenorrhœa; and any source of bodily or mental irritation may produce it. It is a curious, and not easily explained fact, that the aged, though they dream more than the middle-aged, are less addicted to somnambulism

* Good's Study of Medicine, vol. iv. p. 175, 3d edit.

and sleep-talking. Indeed, these phenomena are seldom noticed in old people.

It has been matter of surprise to many, that somnambulists often get into the most dangerous situations without experiencing terror. But the explanation of this ought not to be attended with any real difficulty; for we must reflect, that alarm cannot be felt unless we apprehend danger, and that the latter, however great it may be, cannot excite emotion of any kind, so long as we are ignorant of its existence. This is the situation in which sleep-walkers, in a great variety of cases, stand. The reasoning faculties, which point out the existence of danger, are generally in a state of complete slumber, and unable to produce corresponding emotions in the mind. And even if danger should be perceived by a sleep-walker and avoided, as is sometimes the case, his want of terror is to be imputed to a quiescent state of the organ of *Cautiousness*; the sense of fear originating in high excitement of this particular part of the brain. That the reasoning faculties, however, are sometimes only very partially suspended we have

abundant evidence, in the fact of the individual not only, now and then, studiously avoiding danger, but performing offices which require no small degree of judgment. In the higher kinds of somnambulism, so many of the organs of the brain are in activity, and there is such perfect wakefulness of the external senses and locomotive powers, that the person may almost be said to be awake.

Somnambulism bears a closer analogy than a common dream to madness. "Like madness it is accompanied with muscular action, with coherent and incoherent conduct, and with that complete oblivion (in most cases) of both, which takes place in the worst grade of madness."^{*}

Somnambulists generally walk with their eyes open, but these organs are nevertheless, frequently asleep, and do not exercise their functions. This fact was well known to Shakspeare, as is apparent in the fearful instance of Lady Macbeth:—

Doctor. You see her eyes are open.

Gentlewoman. Ay, but their sense is shut."

* Rush's Medical Inquiries.

The following is a remarkable instance in point, and shows that though the power of vision was suspended, that of hearing continued in full operation.

A female servant in the town of Chelmsford, surprised the family, at four o'clock one morning, by walking down a flight of stairs in her sleep, and rapping at the bed-room door of her master, who inquired what she wanted? when, in her usual tone of voice, she requested some cotton, saying that she had torn her gown, but hoped that her mistress would forgive her: at the same time bursting into tears. Her fellow-servant, with whom she had been conversing for some time, observed her get out of bed, and quickly followed her, but not before she had related the pitiful story. She then returned to her room, and a light having been procured, she was found groping to find her cotton-box. Another person went to her, when, perceiving a difference in the voice; she called out, "That is a different voice, that is my mistress," which was not the case—thus clearly showing that she *did not see* the object before her, although her eyes were *wide open*.

Upon inquiry as to what was the matter, she only said that she wanted some cotton, but that her fellow-servant had been to her master and mistress, making a fuss about it. It was now thought prudent that she should be allowed to remain quiet for some short time, and she was persuaded to lie down with her fellow-servant, until the usual hour of rising, thinking that she might then awake in her accustomed manner. This failing in effect, her mistress went up to her room, and rather angrily desired her to get up, and go to her work, as it was now six o'clock; this she refused, telling her mistress that if she did not please her, she might look out for another servant, at the same time saying, that she would not rise up at two o'clock, (pointing to the window,) to injure her health for any one. For the sake of a joke, she was told to pack up her things, and start off immediately, but to this she made no reply. She rebuked her fellow-servant for not remaining longer in bed, and shortly after this became quiet. She was afterwards shaken violently, and awoke. She then rose, and seeing the cotton-box disturbed, demanded to know why

it had been meddled with, not knowing that she alone was the cause of it. In the course of the day several questions were put to her in order to try her recollection, but the real fact, of her walking, was not made known to her; and she is still quite unconscious of what has transpired.

The next case is of a different description, and exhibits a dormant state of the sense of hearing, while sight appears, throughout, to have been in active operation.

A young man named Johns, who works at Cardrew, near Redruth, being asleep in the sump-house of that mine, was observed by two boys to rise and walk to the door, against which he leaned: shortly after, quitting that position, he walked to the engine-shaft, and safely descended to the depth of twenty fathoms, where he was found by his comrades soon after, with his back resting on the ladder. They called to him, to apprise him of the perilous situation in which he was, but he did not hear them, and they were obliged to shake him roughly till he awoke, when he appeared totally at a loss to account for his being so situated.

In Lodge's "Historical Portraits," there is a likeness, by Sir Peter Lely, of Lord Culpepper's brother, so famous as a dreamer. In 1686, he was indicted at the Old Bailey, for shooting one of the Guards, and his horse to boot. He pleaded somnambulism, and was acquitted on producing nearly fifty witnesses to prove the extraordinary things he did in his sleep.

A very curious circumstance is related of Dr Franklin, in the memoirs of that eminent philosopher, published by his grandson. "I went out," said the Doctor, "to bathe in Martin's salt water hot bath, in Southampton, and floating on my back fell asleep, and slept nearly an hour, by my watch, without sinking or turning—a thing I never did before, and should hardly have thought possible."

A case still more extraordinary occurred some time ago in one of the towns on the coast of Ireland. About two o'clock in the morning, the watchmen on the Revenue quay, were much surprised at descrying a man disporting himself in the water, about a hundred yards from the shore. Intimation having been

given to the Revenue boat's crew, they pushed off and succeeded in picking him up, but strange to say, he had no idea whatever of his perilous situation: and it was with the utmost difficulty they could persuade him he was not still in bed. But the most singular part of this novel adventure, and which was afterwards ascertained, was that the man had left his house at twelve o'clock that night, and walked through a difficult, and, to him, dangerous road, a distance of nearly two miles, and had actually swum one mile and a half when he was fortunately discovered and picked up.

Not very long ago a boy was seen fishing off Brest, up to the middle in water. On coming up to him, he was found to be fast asleep.

I know a gentleman who, in consequence of dreaming that the house was broken into by thieves, got out of bed, dropped from the window (fortunately a low one) into the street; and was a considerable distance on his way to warn the police, when he was discovered by one of them, who awoke him, and conducted him home.

A case is related of an English clergyman who used to get up in the night, light his candle, write sermons, correct them with interlineations, and retire to bed again; being all the time asleep. The Archbishop of Bourdeaux mentions a similar case of a student, who got up to compose a sermon while asleep, wrote it correctly, read it over from one end to the other, or at least appeared to read it, made corrections on it, scratched out lines, and substituted others, put in its place a word which had been omitted, composed music, wrote it accurately down, and performed other things equally surprising. Dr Gall takes notice of a miller who was in the habit of getting up every night and attending to his usual avocation at the mill, then returning to bed: on awaking in the morning, he recollected nothing of what passed during night. Martinet speaks of a saddler who was accustomed to rise in his sleep and work at his trade; and Dr Pritchard of a farmer who got out of bed, dressed himself, saddled his horse, and rode to the market, being all the while asleep. Dr Blacklock, on one occasion, rose from bed, to

which he had retired at an early hour, came into the room where his family were assembled, conversed with them, and afterwards entertained them with a pleasant song, without any of them suspecting he was asleep, and without his retaining, after he awoke, the least recollection of what he had done. It is a singular, yet well authenticated fact, that in the disastrous retreat of Sir John Moore, many of the soldiers fell asleep, yet continued to march along with their comrades.

The stories related of sleep-walkers are, indeed, of so extraordinary a kind, that they would almost seem fictitious, were they not supported by the most incontrovertible evidence. To walk on the house-top, to scale precipices, and descend to the bottom of frightful ravines, are common exploits with the somnambulist; and he performs them with a facility far beyond the power of any man who is completely awake. A story is told of a boy, who dreamed that he got out of bed, and ascended to the summit of an enormous rock, where he found an eagle's nest, which, he brought away with him, and placed beneath

his bed. Now, the whole of these events actually took place; and what he conceived, on waking, to be a mere vision, was proved to have had an actual existence, by the nest being found in the precise spot where he imagined he had put it, and by the evidence of spectators who beheld his perilous adventure. The precipice which he ascended, was of a nature that must have baffled the most expert mountaineer, and such as, at other times, he never could have scaled. In this instance, the individual was as nearly as possible, without actually being so, awake. All his bodily, and almost the whole of his mental powers, appear to have been in full activity. So far as the latter are concerned, we can only conceive a partial defect of the judgment to have existed, for that, it was not altogether abolished is pretty evident from the fact of his proceeding to work precisely as he would have done, had he, in his waking hours, seriously resolved to make such attempt: the defect lay in making the attempt at all; and still more in getting out of bed to do so in the middle of the night.

Somnambulism, as well as lunacy, sometime

bestows supernatural strength upon the individual. Mr Dubrie, a musician in Bath, affords an instance of this kind. One Sunday, while awake, he attempted in vain to force open the window of his bed-room, which chanced to be nailed down; but having got up in his sleep, he repeated the attempt successfully, and threw himself out, by which he unfortunately broke his leg.

Sleep-walking is sometimes periodical. Martinet describes the case of a watchmaker's apprentice who had an attack of it every fortnight. In this state, though insensible to all external impressions, he would perform his work with his usual accuracy, and was always astonished, on awaking, at the progress he had made. The paroxysm began with a sense of heat in the epigastrium extending to the head, followed by confusion of ideas and complete insensibility, the eyes remaining open with a fixed and vacant stare. This case, which undoubtedly originated in some diseased state of the brain, terminated in epilepsy. Dr Gall relates that he saw at Berlin a young man, sixteen years of age, who had, from time to

time, very extraordinary fits. He moved about unconsciously in bed, and had no perception of any thing that was done to him: at last he would jump out of bed, and walk with rapid steps about the room, his eyes being fixed and open. Several obstacles which were placed by Dr Gall in his way, he either removed or cautiously avoided. He then threw himself suddenly again upon bed, moved about for some time, and finished by jumping up awake, not a little surprised at the number of curious people about him.

The facility with which somnambulists are awakened from the paroxysm, differs extremely in different cases. One man is aroused by being gently touched or called upon, by a flash of light, by stumbling in his peregrinations, or by setting his foot in water. Another remains so heavily asleep, that it is necessary to shout loudly, to shake him with violence, and make use of other excitations equally powerful. In this condition, when the sense of vision chances to be dormant, it is curious to look at his eyes. Sometimes they are shut; at other times wide open; and when the latter

is the case, they are observed to be fixed and inexpressive, "without speculation" or energy, while the pupil is contracted, as in the case of perfect sleep.

It is not always safe to arouse a sleep-walker; and many cases of the fatal effects thence arising, have been detailed by authors. Nor is it at all unlikely that a person, even of strong nerves, might be violently agitated by awaking in a situation so different from that in which he lay down. Among other examples, that of a young lady, who was addicted to this affection, may be mentioned. Knowing her failing, her friends made a point of locking the door, and securing the window of her chamber in such a manner that she could not possibly get out. One night, these precautions were unfortunately overlooked; and, in a paroxysm of somnambulism, she walked into the garden behind the house. While there she was recognised by some of the family, who were warned by the noise she made on opening the door, and they followed and awoke her; but such was the effect produced upon her

nervous system, that she almost instantly expired.

The remote causes of sleep-walking are so obscure, that it is seldom we are able to ascertain them. General irritability of frame, a nervous temperament, and bad digestion will dispose to the affection. Being a modification of dreaming, those who are much troubled with the latter will, consequently, be most prone to its attacks. The causes, however, are, in a great majority of cases, so completely unknown, that any attempt to investigate them would be fruitless; and we are compelled to refer the complaint to some idiosyncrasy of constitution beyond the reach of human knowledge.

According to the report made by a Committee of the Royal Academy of Sciences in Paris, animal magnetism appears to have the power of inducing a peculiar species of somnambulism. The circumstances seem so curious, that, even authenticated as they are by men of undoubted integrity and talent, it is extremely difficult to place reliance upon them. The person who is thrown into the magnetic

sleep is said to acquire a new consciousness, and entirely to forget all the events of his ordinary life. When this sleep is dissolved, he gets into his usual state of feeling and recollection, but forgets every thing that happened during the sleep; being again magnetized, however, the remembrance of all that occurred in the previous sleep is brought back to his mind. In one of the cases above related, the patient, a lady of sixty-four years, had an ulcerated cancer in the right breast. She had been magnetized for the purpose of dissolving the tumour, but no other effect was produced than that of throwing her into a species of somnambolic sleep, in which sensibility was annihilated, while her ideas retained all their clearness. In this state, her surgeon, M. Chapelain, disposed her to submit to an operation, the idea of which she rejected with horror *when awake*. Having formally given her consent, she undressed herself, sat down upon a chair, and the diseased glands were carefully and deliberately dissected out, the patient conversing all the time and being perfectly insensible of pain. On awaking she

had no consciousness whatever of having been operated upon; but being informed of the circumstance, and seeing her children around her, she experienced the most lively emotion, which the magnetizer instantly checked by again setting her asleep. These facts appear startling and incredible. I can give no opinion upon the subject from any thing I have seen myself; but the testimony of such men as Cloquet, Georget, and Itard, is not to be received lightly on any physiological point; and they all concur in bearing witness to such facts as the above. In the present state of knowledge and opinion, with regard to animal magnetism, and the sleep occasioned by it, I shall not say more at present, but refer the reader to the ample details contained in the Parisian Report; an able translation of which into English has been made by Mr Colquhoun.

When a person is addicted to somnambulism, great care should be taken to have the door and windows of his sleeping apartment secured, so as to prevent the possibility of egress, as he sometimes forces his way through the panes of glass: this should be put out of his power,

by having the shutters closed, and bolted in such a way that they cannot be opened without the aid of a key or screw, or some such instrument, which should never be left in the room where he sleeps, but carried away, while the door is secured on the outside. Some have recommended that a tub of water should be put by the bedside, that, on getting out, he might step into it, and be awakened by the cold; but this, from the suddenness of its operation, might be attended with bad consequences in very nervous and delicate subjects. It is a good plan to fix a cord to the bedpost, and tie the other end of it securely round the person's wrist. This will effectually prevent mischief if he attempt to get up. Whenever it can be managed, it will be prudent for another person to sleep along with him. In all cases, care should be taken not to arouse him suddenly. This must be done as gently as possible; and when he can be conducted to bed without being awakened at all, it is still better. Should he be perceived in any dangerous situation, as on the house-top, or the brink of a precipice, the utmost caution is requisite; for, if we call

loudly upon him, his dread, on recovering, at finding himself in such a predicament, may actually occasion him to fall, where, if he had been left to himself, he would have escaped without injury.

To prevent a recurrence of somnambulism, we should remove if possible, the cause which gave rise to it. Thus, if it proceed from a disordered state of the stomach, or biliary system, we must employ the various medicines used in such cases. Plenty of exercise should be taken, and late hours and much study avoided. If it arises from plethora, he must be bled, and live low; should hysteria produce it, antispasmodics, such as valerian, ammonia, assafoetida, and opium may be necessary.

But, unfortunately, we can often refer sleep-walking to no complaint whatever. In this case, all that can be done is to carry the individual as safely as possible through the paroxysm, and prevent him from injury by the means we have mentioned. In many instances, the affection will wear spontaneously away: in others it will continue in spite of every remedy.

CHAPTER VIII.

SLEEP-TALKING.

THIS closely resembles somnambulism, and proceeds from similar causes. In somnambulism, those parts of the brain which are awake call the muscles of the limbs into activity; while, in sleep-talking, it is the muscles necessary for the production of speech which are animated by the waking cerebral organs. During sleep, the organ of *Language* may be active, either singly or in combination with other parts of the brain; and of this activity sleep-talking is the result.* If, while we

* Among the insane, the organ just mentioned is occasionally excited to such a degree that, even in the waking state, the patient, however *desirous*, is literally *unable* to refrain from speaking. Mr W. A. F. Browne

dream that we are conversing with some one, the organ of *Language* is in such a high state of activity as to rouse the muscles of speech, we are sure to talk. It often happens, however, that the cerebral parts, though sufficiently active to make us dream that we are speaking, are not excited so much as to make us actually speak. We only suppose we are

has reported two cases of this nature in the 37th No. of the *Phrenological Journal*. The first is that of a woman in the hospital of *La Salpêtrière* in Paris. Whenever she encounters the physician or other of the attendants, she bursts forth into an address which is delivered with incredible rapidity and vehemence, and is generally an abusive or ironical declamation against the tyranny, cruelty, and injustice to which she is exposed. In the midst of her harangues, however, she introduces frequent and earnest parenthetical declarations "that she does not mean what she says; that though she vows vengeance and showers imprecations on her medical attendant, she loves him, and feels grateful for his kindness and forbearance; and that, though anxious to evince her gratitude and obedience by silence, she is constrained by an invisible agency to speak." In the other case, the individual speaks constantly: "sleep itself does not yield an intermission; and there is strong reason to believe that a part, at least, of his waking orations is delivered either without the cognizance of the other powers, or without consciousness on the part of the speaker."

carrying on a conversation, while, in reality, we are completely silent. To produce sleep-talking, therefore, the brain, in some of its functions, must be so much awake as to put into action the voluntary muscles by which speech is produced.

The conversation in this state, is of such subjects as our thoughts are most immediately occupied with; and its consistency or incongruity depends upon that of the prevailing ideas—being sometimes perfectly rational and coherent; at other times, full of absurdity. The voice is seldom the same as in the waking state. This I would impute to the organs of hearing being mostly dormant, and consequently unable to guide the modulations of sound. The same fact is observable in very deaf persons, whose speech is usually harsh, unvaried, and monotonous. Sometimes the faculties are so far awake, that we can manage to converse with the individual, and extract from him the most hidden secrets of his soul: circumstances have thus been ascertained which would otherwise have remained in perpetual obscurity. By a little address in this

way, a gentleman lately detected the infidelity of his wife from some expressions which escaped her while asleep, and succeeded in finding out that she had a meeting arranged with her paramour for the following day. Lord Byron describes a similar scene in his "Parasina:"

" And Hugo is gone to his lonely bed,
To covet there another's bride ;
But she must lay her conscious head
A husband's trusting heart beside.
But fever'd in her sleep she seems,
And red her cheek with troubled dreams,
And mutters *she in her unrest*
A name she dare not breath by day,
And clasps her Lord unto her breast
Which pants for one away."

From what has been said of somnambulism, the reader will be prepared for phenomena equally curious as regards sleep-talking. Persons have been known, for instance, who delivered sermons and prayers during sleep; among others, Dr Haycock, Professor of Medicine in Oxford. He would give out a text in his sleep, and deliver a good sermon upon it; nor could all the pinching and pulling

of his friends prevent him. "One of the most remarkable cases of speaking during sleep," observes a writer in *Frazer's Magazine*, "is that of an American lady, now (we believe) alive, who preached during her sleep, performing regularly every part of the Presbyterian service, from the psalm to the blessing. This lady was the daughter of respectable and even wealthy parents; she fell into bad health, and, under its influence, she disturbed and annoyed her family by her nocturnal eloquence. Her unhappy parents, though at first surprised, and perhaps flattered by the exhibition in their family of so extraordinary a gift, were at last convinced that it was the result of disease; and, in the expectation that their daughter might derive benefit from change of scene, as well as from medical skill, they made a tour with her of some length, and visited New York and some of the other great cities of the Union. We know individuals who have heard her preach during the night in steam-boats; and it was customary, at tea parties in New York, (in the houses of medical practitioners,) to put the lady to bed in a room ad-

jacent to the drawing-room, in order that the dilettanti might witness so extraordinary a phenomenon. We have been told by ear-witnesses, that her sermons, though they had the appearance of connected discourses, consisted chiefly of texts of scripture strung together. It is strongly impressed upon our memory that some of her sermons were published in America."

In the Edinburgh Journal of Science, a lady who was subject to spectral illusions, is described as being subject to talk in her sleep with great fluency, to repeat great portions of poetry, especially when unwell, and even to *cap* verses for half an hour, at a time, never failing to quote lines beginning with the final letter of the preceding till her memory was exhausted.

Dr Dyce, in the Edinburgh Philosophical Transactions, relates the case of Maria C——, who, during one paroxysm of somnambulism, recollected what took place in a preceding one, without having any such recollection during the interval of wakefulness. One of the occasions in which this young woman mani-

fested the power in question, was of a very melancholy nature. Her fellow-servant, a female of abandoned character, having found out that, on awaking, she entirely forgot every thing which occurred during the fit, introduced by stealth into the house, a young man of her acquaintance, and obtained for him an opportunity of treating Maria in the most brutal and treacherous manner. The wretches succeeded in their object by stopping her mouth with the bedclothes, by which and other means, they overcame the vigorous resistance she was enabled to make to their villany, even in her somnolent state. On awaking, she had no consciousness whatever of the outrage; but some days afterwards, having fallen into the same state, it recurred to her memory, and she related to her mother all the revolting particulars. The state of mind in this case was perfectly analogous to that which is said to occur in the magnetic sleep; but the particular state of the brain which induces such conditions will, I believe, ever remain a mystery.*

* A case, in some respects similar, was published in the Medical Repository, by Dr Mitchell, who received

The following singular case of sleep-talking, combined with somnambulism, will prove interesting to the reader:—

the particulars of it from Major Ellicot, Professor of Mathematics in the United States Military Academy at West Point. The subject was a young lady of a good constitution, excellent capacity, and well educated. "Her memory was capacious and well stored with a copious stock of ideas. Unexpectedly, and without any forewarning, she fell into a profound sleep, which continued several hours beyond the ordinary term. On waking, she was discovered to have lost every trait of acquired knowledge. Her memory was *tabula rasa*—all vestiges, both of words and things were obliterated and gone. It was found necessary for her to learn every thing again. She even acquired, by new efforts, the art of spelling, reading, writing, and calculating, and gradually became acquainted with the persons and objects around, like a being for the first time brought into the world. In these exercises she made considerable proficiency. But after a few months, another fit of somnolency invaded her. On rousing from it, she found herself restored to the state she was in before the first paroxysm; but was wholly ignorant of every event and occurrence that had befallen her afterwards. The former condition of her existence she now calls the Old State, and the latter the New State; and she is as unconscious of her double character as two distinct persons are of their respective natures. For example, in her old state, she possesses all the original knowledge; in her

“A very ingenious and elegant young lady, with light eyes and hair, about the age of seventeen, in other respects well, was suddenly seized with this very wonderful malady. The disease began with violent convulsions of almost every muscle of her body, with great but vain efforts to vomit, and the most violent hiccoughs that can be conceived: these were succeeded in about an hour with a fixed spasm; in which, one hand was applied to her head, and the other to support it: in about half an hour these ceased, and the reverie began sud-

new state, only what she acquired since. If a lady or gentleman be introduced to her in the old state, and *vice versa*, (and so of all other matters) to know them satisfactorily, she must learn them in both states. In the old state, she possesses fine powers of penmanship, while in the new, she writes a poor, awkward hand, having not had time or means to become expert. During four years and upwards, she has had periodical transitions from one of these states to the other. The alterations are always consequent upon a long and sound sleep. Both the lady and her family are now capable of conducting the affair without embarrassment. By simply knowing whether she is in the old or new state, they regulate the intercourse, and govern themselves accordingly.”

denly, and was at first manifest by the look of her eyes and countenance, which seemed to express attention. Then she conversed aloud with imaginary persons, with her eyes open, and could not, for about an hour, be brought to attend to the stimulus of external objects by any kind of violence which it was possible to use: these symptoms returned in this order every day for five or six weeks.

“These conversations were quite consistent, and we could understand what she supposed her imaginary companions to answer, by the continuation of her part of the discourse. Sometimes she was angry, at other times showed much wit and vivacity, but was most frequently inclined to melancholy. In these reveries, she sometimes sung over some music with accuracy, and repeated whole passages from the English Poets. In repeating some lines from Mr Pope’s works, she had forgot one word, and began again, endeavouring to recollect it; when she came to the forgotten word it was shouted aloud in her ears, and this repeatedly, to no purpose; but by many trials she at length regained it herself.

“ Those paroxysms were terminated with the appearance of inexpressible surprise and great fear, from which she was some minutes in recovering herself, calling on her sister with great agitation, and very frequently underwent a repetition of convulsions, apparently from the pain of fear.

“ After having thus returned for about an hour a-day, for two or three weeks, the reveries seemed to become less complete, and some of the circumstances varied, so that she could walk about the room in them, without running against any of the furniture; though these motions were at first very unsteady and tottering. And, afterwards, she once drank a dish of tea, when the whole apparatus of the tea-table was set before her, and expressed some suspicion that a medicine was put into it; and once seemed to smell at a tuberoses, which was in flower in her chamber, and deliberated aloud about breaking it from the stem, saying, ‘ It would make her sister so charmingly angry.’ At another time, in her melancholy moments, she heard the bell, and then taking off one of her shoes as she sat

upon the bed, 'I love the colour black,' says she; 'a little wider and a little longer, and even this might make me a coffin!' Yet it is evident she was not sensible at this time, any more than formerly, of seeing or hearing any person about her; indeed, when great light was thrown upon her by opening the shutters of the window, she seemed less melancholy; and when I have forcibly held her hands, or covered her eyes, she appeared to grow impatient, and would say, she could not tell what to do, for she could neither see nor move. In all these circumstances, her pulse continued unaffected, as in health. And when the paroxysm was over, she could never recollect a single idea of what had passed."*

Equally extraordinary is the following instance of combined sleep-talking and somnambulism:—

"A remarkable instance of this affection occurred to a lad named George David, sixteen years and a half old, in the service of Mr Hewson, butcher, of Bridge-Road, Lambeth

* Darwin's *Zoonomia*."

At about twenty minutes after nine o'clock, the lad bent forward in his chair, and rested his forehead on his hands, and in ten minutes started up, went for his whip, put on his one spur, and went thence to the stable; not finding his own saddle in the proper place, he returned to the house and asked for it. Being asked what he wanted with it, he replied to go his rounds. He returned to the stable, got on the horse without the saddle, and was proceeding to leave the stable: it was with much difficulty and force that Mr Hewson, junior, assisted by the other lad, could remove him from the horse; his strength was great, and it was with difficulty he was brought in doors. Mr Hewson, senior, coming home at this time, sent for Mr Benjamin Ridge, an eminent practitioner, in Bridge-Road, who stood by him for a quarter of an hour, during which time the lad considered himself as stopped at the turnpike-gate, and took sixpence out of his pocket to be changed; and holding out his hand for the change, the sixpence was returned to him. He immediately observed, 'None of your nonsense—that is the sixpence again;

give me my change;' when twopence halfpenny was given to him, he counted it over, and said, 'None of your gammon; that is not right; I want a penny more;' making the threepence halfpenny, which was his proper change. He then said, 'Give me my castor,' (meaning his hat,) which slang term he had been in the habit of using, and then began to whip and spur to get his horse on. His pulse at this time was 136, full and hard; no change of countenance could be observed, nor any spasmodic affection of the muscles, the eyes remaining close the whole of the time. His coat was taken off his arm, shirt-sleeves tucked up, and Mr Ridge bled him to 32 ounces; no alteration had taken place in him during the first part of the time the blood was flowing; at about 24 ounces, the pulse began to decrease; and when the full quantity named above had been taken, it was at 80—a slight perspiration on the forehead. During the time of bleeding, Mr Hewson related a circumstance of a Mr Harris, optician, in Holborn, whose son, some years since, walked out on the parapet of the house in his sleep. The boy joined the

conversation, and observed, 'He lived at the corner of Brownlow Street.' After the arm was tied up, he unlaced one boot, and said he would go to bed: in three minutes from this time, he awoke, got up, and asked what was the matter, (having then been one hour in the trance,) not having the slightest recollection of any thing that had passed, and wondered at his arm being tied up, and at the blood, &c. A strong aperient medicine was then administered: he went to bed, slept well, and the next day appeared perfectly well, excepting debility from the bleeding, and operation of the medicine, and has no recollection whatever of what had taken place. None of his family or himself were ever affected in this way before."*

Sleep-talking is generally such a trivial affection as not to require any treatment whatever. In every case the digestive organs must be attended to, and, if disordered, put to rights by suitable medicines. And should the affection proceed, or be supposed to proceed, from

* *Lancet*, vol. i.

hypochondria, hysteria, or the prevalence of any strong mental emotion, these states must be treated according to general principles. When it arises from idiosyncrasy, and becomes habitual, I believe that no means which can be adopted will be of much avail. As, in the case of somnambulism, it very frequently happens that the affection, after continuing for a long time and baffling every species of treatment, disappears spontaneously.

CHAPTER IX.

SLEEPLESSNESS.

SLEEP takes place as soon as the sensorial power that keeps the brain awake is expended, which, under common circumstances, occurs at our ordinary hour of going to rest, or even sooner, if any soporific cause sufficiently strong should chance to operate. But the above power may be increased by various means, as in cases of physical suffering, or excited imagination, and, consequently, is not expended at the usual time. In this case, the person remains awake, and continues so till the period of its expenditure, which may not happen for several hours after he lies down, or even not at all, during the whole of that night. Now, whatever increases the sensorial power, whe-

ther it be balls, concerts, grief, joy, or bodily pain, is prejudicial to repose. By them the mind is exalted to a pitch of unnatural action, from which it is necessary it should descend before it can roll into the calm channel of sleep.

Whatever stimulates the external senses, however slightly, may prevent sleep. Thus, the ticking of a clock has this effect with very sensitive people; and a candle burning in the chamber is attended with the same result. Even when the eyes are shut this may take place, for the eye-lids are sufficiently transparent to transmit a sense of light to the retina. For the same reason, the light of day peering in at the window may awake us from, or prevent slumber. It is said that Napoleon could never sleep if exposed to the influence of light, although, in other circumstances, slumber appeared at his bidding with surprising readiness.

A constitutional restlessness is sometimes brought on by habitually neglecting to solicit sleep when we lie down, by which means the brain is brought into such a state of irrita-

bility, that we can hardly sleep at all. Chronic wakefulness, originating from any mental or bodily affection, sometimes degenerates into a habit, in which the sufferer will remain for weeks, months, or even years, if authors are to be believed, awake. In the disease called delirium tremens, wakefulness is a constant symptom, and frequently continues for many successive days and nights. It is also an attendant upon all disorders accompanied by acute suffering, especially when the brain is affected, as in phrenitis, or fever. Maniacs, from the excited state of their sensorium, are remarkably subject to want of sleep; and this symptom is often so obstinate as to resist the most powerful remedies we can venture to prescribe.

Certain stimulating agents, such as tea or coffee, taken shortly before going to bed, have often the effect of preventing sleep. I would impute this to their irritative properties, which, by supplying the brain with fresh sensorial power, enable it to carry on uninterruptedly all its functions longer than it would otherwise do, and consequently pre-

vent it from relapsing into slumber at the usual period.

Any uneasy bodily feeling has the same effect—both preventing the accession of sleep, and arousing us from it when it has fairly taken place. Thus, while moderate fatigue provokes slumber, excessive fatigue, owing to the pain and irritation it necessarily occasions, drives it away. Sickness, cold, heat, pregnancy, the ordinary calls of nature, a disagreeable bed, the want of an accustomed supper, too heavy a supper, or uneasiness of any kind, have the same result. Cold is most apt to induce sleeplessness, when partial, especially if it be confined to the feet; for, when general and sufficiently intense, it has the opposite effect, and gives rise to drowsiness. Certain diseases, such as hemicrania, tic douloureux, &c., have actually kept the person awake for three successive months; and all painful affections prevent sleep more or less. But the most violent tortures cannot altogether banish, however much they may retard it. Sooner or later the fatigue, which a want of it occasions, prevails, and slumber ultimately ensues.

Sleeplessness is sometimes produced by a sense of burning heat in the soles of the feet and palms of the hands, to which certain individuals are subject some time after lying down. This seems to proceed from a want of perspiration in those parts, owing generally to impaired digestion.

Mental emotions, of every description, are unfavourable to repose. If a man, as soon as he lays his head upon the pillow, can banish thinking, he is morally certain to fall asleep. There are many individuals so constituted, that they can do this without effort, and the consequence is, they are excellent sleepers. It is very different with those whose minds are oppressed by care, or over stimulated by excessive study. The sorrowful man, above all others, has the most need of sleep; but, far from shedding its benignant influence over him, it flies away, and leaves him to the communionship of his own sad thoughts:—

*“ His slumbers—if he slumber—are not sleep,
But a continuance of enduring thought.”*

It is the same with the man of vivid ima-

gination. His fancy, instead of being subdued by the spell of sleep, becomes more active than ever. Thoughts in a thousand fantastic forms—myriads of waking dreams—pass through his mind, whose excessive activity spurns at repose, and mocks all his endeavours to reduce it to quiescence. Great joy will often scare away sleep for many nights; but, in this respect, it is far inferior to grief, a fixed attack of which has been known to keep the sufferer awake, for several months. Those who meditate much, seldom sleep well in the early part of the night: they lie awake, for perhaps two or three hours, after going to bed, and do not fall into slumber till towards morning. Persons of this description often lie long and are reputed lazy by early risers, although, it is probable, they actually sleep less than these early risers themselves. Long-continued study is highly prejudicial to repose. Boerhaave mentions that, on one occasion, owing to this circumstance, he did not close his eyes for six weeks.

Nothing is so hurtful both to the mind and body as want of sleep. Deprived of the

necessary portion, the person gets wan, emaciated, and listless, and very soon falls into bad health: the spirit becomes entirely broken, and the fire of even the most ardent dispositions is quenched. Nor is this law peculiar to the human race, for it operates with similar power upon the lower animals, and deprives them of much of their natural ferocity. An illustration of this fact is afforded in the taming of wild elephants. These animals, when first caught, are studiously prevented from sleeping; in consequence of which, they become, in a few days, comparatively mild and harmless. Restlessness, when long protracted, may terminate in delirium, or confirmed insanity; and, in many diseases, it is the most obstinate symptom we have to struggle against. By it alone, all the existing bad symptoms are aggravated: and as soon as we can succeed in overcoming it, every thing disagreeable and dangerous frequently wears away, and the person is restored to health.

In restlessness, both the perspiration and urinary secretions are usually much increased; there is also an accession of heat in the system,

and a general feverish tendency, unless the want of sleep should proceed from cold.

With regard to the treatment of sleeplessness, a very few words will suffice: in fact, upon this head little more can be said, than a recommendation to obviate the causes from whence it proceeds, and it will naturally disappear. I may mention, however, that when there is no specific disease, either of body or mind, to which the want of sleep can be imputed, the person should keep himself in as cheerful a mood as possible—should rise early, if his strength permits it, and take such exercise as to fatigue himself moderately; and if all these means fail, that he ought to make use of opium. In all cases of restlessness, indeed, this medicine must be had recourse to, if the affection resists every other remedy, and continues so long as to endanger health. Those preparations of opium, the acetate and muriate of morphia, have latterly been a good deal used, and with excellent effect, for the same purpose. When neither opium nor its preparations agree with the constitution, it becomes necessary to employ other narcotics,

especially hyosciamus or hop. A pillow of hops sometimes succeeds in inducing sleep, when other means fail. Such was the case with his late majesty, George III., who, by this contrivance, was relieved from the protracted wakefulness under which he laboured for so long a time. In giving medicines to produce sleep, great attention must be paid to the disease which occasions the restlessness; for, in phrenitis, high fever, and some other disorders, it would be most injurious to administer anodynes of any kind. In such cases, as the restlessness is merely a symptom of the general disease, its removal will depend upon that of the latter. When, however, the acute symptoms have been overcome, and nothing but chronic wakefulness, the result of debility remains behind, it then becomes necessary to have recourse to opium, or such other remedies as may be considered applicable to the particular case. Studious men ought to avoid late reading; and, on going to bed, endeavour to abstract their minds from all intrusive ideas. They should try to circumscribe their thoughts within the narrowest possible circle, and pre-

vent them from becoming rambling or excursive. I have often coaxed myself to sleep by internally repeating, half a dozen of times, any well known rhyme. While doing so, the ideas must be strictly directed to this particular theme, and prevented from wandering; for sometimes, during the process of repetition, the mind takes a strange turn, and performs two offices at the same time, being directed to the rhyme on the one hand, and to something else on the other; and it will be found that the hold it has of the former, is oftentimes much weaker than of the latter. The great secret is, by a strong effort of the will to compel the mind to depart from the favourite train of thought into which it has run, and address itself solely to the internal repetition of what is substituted in its place. If this is persevered in, it will generally be found to succeed; and I would recommend all those who are prevented from sleeping, in consequence of too active a flow of ideas, to try the experiment. As has been already remarked, the more the mind is brought to turn upon a single impression, the more closely it is made

to approach to the state of sleep, which is the total absence of all impressions. People should never go to bed immediately after studying hard, as the brain is precisely in that state of excitement which must prevent sleep. The mind ought previously to be relaxed by light conversation, music, or any thing which requires little thought.

In some cases of restlessness, sleep may be procured by the person getting up, and walking for a few minutes about the room. It is not easy to explain on what principle this acts, but it is certain, that by such means sleep sometimes follows, where previously it had been solicited in vain. It is customary with some people to read themselves into slumber, but dangerous accidents have arisen from this habit, in consequence of the lighted candle setting fire to the bed-curtains. A safer and more effectual way is to get another person to read; in which case, sleep will very generally take place, especially if the subject in question is not one of much interest, or read in a dry monotonous manner. When sleeplessness proceeds from the heat of the weather,

the person should lie very lightly covered, and let the air circulate freely through his room. A cold bath taken shortly before going to bed, or spunging the body with cold water, will often ensure a comfortable night's rest in the hot season of the year. When it arises from heat in the soles or palms, these parts should be bathed with cold vinegar and water, before lying down, and, if necessary, occasionally afterwards till the heat abates, which usually occurs in two or three hours. Attention must also be paid to the stomach and bowels.

An easy mind, a good digestion, and plenty of exercise in the open air, are the grand conduces to sound sleep;—and, accordingly, every man whose repose is indifferent, should endeavour to make them his own as soon as possible. When sleeplessness becomes habitual, the utmost care ought to be taken to overcome the habit, by the removal of every thing that has a tendency to cherish it.

CHAPTER X.

DROWSINESS.

DROWSINESS is symptomatic of apoplexy and some other diseases, but sometimes it exists as an idiopathic affection. There are persons who have a disposition to sleep on every occasion. They do so at all times, and in all places. They sleep after dinner; they sleep in the theatre; they sleep in church. It is the same to them in what situation they may be placed; sleep is the great end of their existence—their occupation—their sole employment. Morpheus is the deity at whose shrine they worship—the only god whose influence over them is omnipotent. Let them be placed in almost any circumstances, and their constitutional failing prevails. It falls upon them

in the midst of mirth ; it assails them when travelling. Let them sail, or ride, or sit, or lie, or walk, sleep overtakes them—binds their faculties in torpor ; and makes them dead to all that is passing around. Such are our dull, heavy-headed, drowsy mortals, those sons and daughters of phlegm—with passions as inert as a Dutch fog, and intellects as sluggish as the movements of the hippopotamus or leviathan. No class of society is so insufferable as this. There is a torpor and obtuseness about their faculties, which render them dead to every impression. They have eyes and ears, yet they neither see nor hear ; and the most exhilarating scenes may be passing before them without once attracting their notice. It is not uncommon for persons of this stamp to fall asleep in the midst of a party to which they have been invited : Mr Mackenzie, in one of his Papers, speaks of an honest farmer having done so alongside of a young lady, who was playing on the harp for his amusement. The cause of this constitutional disposition to doze upon every occasion, seems to be a certain want of activity in the brain, the

result of which is, that the individual is singularly void of fire, energy, and passion. He is of a phlegmatic temperament, generally a great eater, and very destitute of imagination. Such are the general characteristics of those, who are predisposed to drowsiness: the cases where such a state co-exists with intellectual energy are few in number.

Boerhaave speaks of an eccentric physician who took it into his head that sleep was the natural state of man, and accordingly slept eighteen hours out of the twenty-four—till he died of apoplexy, a disease which is always apt to be produced by excessive sleep.*

Cases of constitutional drowsiness are in a

* "As arterial blood, when at rest, acquires the venous character, and the slower its motion the greater is its tendency to assume this character, it is evident that in congestion of blood, by which is simply meant an unusual quantity of blood in the vessels of a part, not flowing with its usual freedom, the part affected has not its proper supply of perfectly arterial blood. Thence congestion in the head must, even from this cause alone, produce drowsiness, to say nothing of the effect of pressure on the cerebral fibres."—*Blumenbach's Physiology*, by Elliotson, p. 285, 4th edit.

great measure without remedy, for the soporific tendency springs from some natural defect, which no medicinal means can overcome.

Equally impossible of cure is the affection when it arises, as it very often does, from old age. Even long before this period of life, as at the age of fifty or sixty, people very often get into somnolent habits, and are pretty sure to fall asleep if they attempt to read, or even if they place themselves in an easy chair before the fire. I know of no cure for this indolent propensity, unless indeed the habit arises, as it sometimes does, from corpulency, in which case it is more manageable, in so far as its cause is occasionally capable of being removed.

Drowsiness sometimes proceeds from a fullness of blood in the head, or a disordered state of the digestive organs. When it originates from the former cause, it becomes necessary to have recourse to general or local blood-letting. The person, likewise, should use, from time to time, mild laxatives, live temperately, and take abundance of exercise. Medicines of a similar kind are necessary when

the affection arises from the state of the stomach and bowels: so soon as these organs are restored to health, the symptomatic drowsiness will naturally disappear.

Persons who feel the disposition to drowsiness gaining upon them, should struggle vigorously against it; for when once the habit is fairly established, its eradication is very difficult. Exercise of body and mind, early rising, and the cold bath, are among the best means for this purpose.

CHAPTER XI.

PROTRACTED SLEEP.

I HAVE already mentioned a few instances of individuals remaining for days or weeks in a state of profound sleep. The nature of this extraordinary affection is, in a great measure, unknown; it arises, in most cases, without any obvious cause, generally resists every method that can be adopted for removing it, and disappears of its own accord.

The case of Mary Lyall, related in the 8th volume of the "Transactions of the Royal Society of Edinburgh," is one of the most remarkable instances of excessive somnolency on record. This woman fell asleep on the morning of the 27th of June, and continued in that state till the evening of the 30th of the

same month, when she awoke and remained in her usual way till the first of July, when she again fell asleep, and continued so till the 8th of August. She was bled, blistered, immersed in the hot and cold bath, and stimulated in almost every possible way, without having any consciousness of what was going on. For the first seven days she continued motionless, and exhibited no inclination to eat. At the end of this time she began to move her left hand; and, by pointing to her mouth, signified a wish for food. She took readily what was given to her; still she discovered no symptoms of hearing, and made no other kind of bodily movement than of her left hand. Her right hand and arm, particularly, appeared completely dead, and bereft of feeling; and even when pricked with a pin, so as to draw blood, never shrunk in the least degree. At the same time, she instantly drew back her left arm whenever it was touched by the point of the pin. She continued to take food whenever it was offered to her. For the first two weeks, her pulse generally stood at 50, during the third and fourth week about 60; and, on the

day before her recovery, at 70 or 72. Her breathing was soft and almost imperceptible, but during the night-time she occasionally drew it more strongly, like a person who has first fallen asleep. She evinced no symptom of hearing, till about four days before her recovery. On being interrogated, after this event, upon her extraordinary state, she mentioned that she had no knowledge of any thing that had happened—that she had never been conscious of either having needed or received food, or of having been blistered; and expressed much surprise on finding her head shaved. She had merely the idea of having passed a long night in sleep.

The case of Elizabeth Perkins is also remarkable. In the year 1788, she fell into a profound slumber, from which nothing could arouse her, and remained in this state for between eleven and twelve days, when she awoke of her own accord, to the great joy of her relatives, and wonder of the neighbourhood. On recovering, she went about her usual business; but this was only for a short period, for in a week after she relapsed again into a sleep

which lasted some days. She continued, with occasional intervals of wakefulness, in a dozing state for several months, when she expired.

There was lately at Kirkhaeton a remarkable instance of excessive sleep. A poor paralytic, twenty years of age, was seldom, for the period of twelve months, awake more than three hours in the twenty-four. On one occasion he slept for three weeks: he took not a particle of either food or drink; nothing could rouse him, even for a moment; yet his sleep appeared to be calm and natural.

The case of Elizabeth Armitage of Woodhouse, near Leeds, may also be mentioned. The age of this person was sixty-nine years. She had been for several months in a decline, during which she had taken very little sustenance, when she fell into a state of lethargic stupor, on the morning of the 1st of July, 1827, in which condition she remained, without uttering one word, receiving any food, or showing any signs of life, except breathing, which was at times almost imperceptible. In

this state she continued for eight days, when she expired without a groan.

Excessively protracted sleep may ensue from the injudicious use of narcotics. A very striking instance of this kind occurred on 17th February, 1816, near Lymington. In consequence of a complaint with which a child had been painfully afflicted for some time previous, its mother gave it an anodyne, (probably laudanum,) for the purpose of procuring it rest. The consequence was, that it fell into a profound sleep, which continued for three weeks. In this case, in addition to an excessive dose, the child must have possessed some constitutional idiosyncrasy, which favoured the operation of the medicine in a very powerful manner.

One of the most extraordinary instances of excessive sleep, is that of the Lady of Nismes, published in 1777, in the "Memoirs of the Royal Academy of Sciences at Berlin." Her attacks of sleep took place periodically, at sunrise and about noon. The first continued till within a short time of the accession of the second, and the second till between seven and

eight in the evening—when she awoke and continued so till the next sunrise. The most extraordinary fact connected with this case is, that the first attack commenced always at day-break, whatever might be the season of the year, and the other always immediately after twelve o'clock. During the brief interval of wakefulness which ensued shortly before noon, she took a little broth, which she had only time to do, when the second attack returned upon her, and kept her asleep till the evening. Her sleep was remarkably profound, and had all the characters of complete insensibility, with the exception of a feeble respiration, and a weak but regular movement of the pulse. The most singular fact connected with her remains to be mentioned. When the disorder had lasted six months, and then ceased, she had an interval of perfect health for the same length of time. When it lasted one year, the subsequent interval was of equal duration. The affection at last wore gradually away; and she lived, entirely free of it, for many years after. She died in the eighty-first year of her age, of dropsy, a complaint

which had no connexion with her preceding disorder.

There are a good many varieties in the phenomena of protracted sleep. In some cases, the individual remains for many days without eating or drinking; in others, the necessity for these natural wants arouses him for a short time from his slumber, which time he employs in satisfying hunger and thirst, and then instantly gets into his usual state of lethargy. The latter kind of somnolency is sometimes feigned by impostors for the purpose of extorting charity; on this account, when an instance of the kind occurs, it should be narrowly looked into, to see that there is no deception.

The power possessed by the body of subsisting for such a length of time in protracted sleep, is most remarkable, and bears some analogy to the abstinence of the Polar bear in the winter season. It is to be observed, however, that during slumber, life can be supported by a much smaller portion of food than when we are awake, in consequence of the

diminished expenditure of the vital energy which takes place in the former state.

All that can be done for the cure of protracted somnolency, is to attempt to rouse the person by the use of stimuli, such as blistering, pinching, the warm or cold bath, the application of sternutatories to the nose, &c. Blood-
ing should be had recourse to, if we suspect any apoplectic tendency to exist. Every means must be employed to get nourishment introduced into the stomach; for this purpose, if the sleeper cannot swallow, nutritious fluids should be forced, from time to time, into this organ by means of Jukes' pump, which answers the purpose of filling as well as evacuating it.

CHAPTER XII.

SLEEP FROM COLD.

THIS kind of sleep is so peculiar, that it requires to be considered separately. The power of cold in occasioning slumber, is not confined to man, but pervades a very extensive class of animals. The hybernation, or winter torpitude of the brown and Polar bear, results from this cause. Those animals continue asleep for months; and do not awake from their apathy till revived by the genial temperature of spring. The same is the case with the hedge-hog, the badger, the squirrel, and several species of the mouse and rat tribes, such as the dormouse and marmot: as also with the land tortoise, the frog, and almost all the individuals of the lizard, insect, and

serpent tribes. Fishes are often found imbedded in the ice, and, though in a state of apparent death, become at once lively and animated on being exposed to heat. "The fish froze," says Captain Franklin, "as fast as they were taken out of the nets, and in a short time became a solid mass of ice, and by a blow or two of the hatchet were easily split open, when the intestines might be removed in one lump. If, in this completely frozen state, they were thawed before the fire, they recovered their animation." Sheep sometimes remain for several weeks in a state of torpitude, buried beneath wreaths of snow. Swallows are occasionally in the same state, being found torpid and insensible in the hollows of trees, and among the ruins of old houses during the winter season; but with birds this more rarely happens, owing, probably, to the temperature of their blood being higher than that of other animals, and thereby better enabling them to resist the cold. Almost all insects sleep in winter. This is particularly the case with the crysalis, and such grubs as cannot at that season procure their food. In hybernating animals, it

is impossible to trace any peculiarity of structure which disposes them to hybernate, and enables life to be sustained during that period. So far, the subject is involved in deep obscurity. According to Dr Edwards, the temperature of such animals sinks considerably during sleep, even in summer.

Want of moisture produces torpor in some animals. This is the case with the garden snail, which revives if a little water is thrown on it. Snails, indeed, have revived after being dried for fifteen years. Mr Baucer has restored the *vibris tritici* (a species of worm) after perfect torpitude and apparent death for five years and eight months, by merely soaking it in water. The *furcularia anostoea*, a small microscopic animal, may be killed and revived a dozen times by drying it and then applying moisture. According to Spallanzani, animalculi have been recovered by moisture after a torpor of twenty-seven years. Larger animals are thrown into the same state from want of moisture. Such, according to Humboldt, is the case with the alligator

and boa constrictor during the dry season in the plains of Venezuela, and with the *centenes solokus*, a species of hedge-hog, found in Madagascar; so that dryness, as well as cold, produces hybernation, if, in such a case, we may use that term.

The power of intense cold in producing sleep, is very great in the human subject, and nothing in the winter season is more common than to find people lying dead in fields and on the highways from such a cause. An overpowering drowsiness steals upon them, and, if they yield to its influence, death is almost inevitable. This is particularly the case in snow-storms, in which it is often impossible to get a place of shelter.

This state of torpor, with the exception perhaps of catalepsy, is the most perfect sleep that can be imagined: it approaches almost to death in its apparent annihilation of the animal functions. Digestion is at an end, and the secretions and excretions suspended: nothing seems to go on but circulation, respiration, and absorption. The two former

are extremely languid,* but the latter tolerably vigorous, if we may judge from the quantity of fat which the animal loses during its torpid state. The bear, for example, on going to its wintry rest, is remarkably corpulent; on awaking from it, quite emaciated; in which state, inspired by the pangs of hunger, it sallies forth with redoubled fury upon its prey. Life is sustained by the absorption of this fat, which for months serves the animal as provision. Such emaciation, however, is not common to all hibernating animals, some of whom lose little or nothing by their winter torpitude.

Hybernation may be prevented. Thus the Polar bear in the menagerie at Paris never hibernated; and in the marmot and hedge-hog hibernation is prevented if the animals be kept in a higher temperature. It is also a curious fact, that an animal, if exposed to a more intense cold, while hibernating, is

* The extremely languid, or almost suspended state of these two functions, is demonstrated by the fact, that an animal in a state of hibernation may be placed for an hour in a jar of hydrogen without suffering death.

awaked from its lethargy. Exposing a hyber-nating animal to light has also, in many cases, the same effect.

Some writers, and Buffon among the rest, deny that such a state of torpor, as we have here described, can be looked upon as sleep. This is a question into which it is not necessary at present to enter. All I contend for, is, that the state of the mind is precisely the same here as in ordinary sleep—that, in both cases, the organs of the senses and of volition are equally inert; and that though the conditions of the secretive and circulating systems are different, so many circumstances are nevertheless identical, that we become justified in considering the one in a work which professes to treat of the other.

In Captain Cook's first voyage, a memorable instance is given of the power of intense cold in producing sleep. It occurred in the island of Terra-del-Fuego. Dr Solander, Mr Banks, and several other gentlemen had ascended the mountains of that cold region, for the purpose of botanizing and exploring the country. "Dr Solander, who had more

than once crossed the mountains which divide Sweden from Norway, well knew that extreme cold, especially when joined with fatigue, produces a torpor and sleepiness, that are almost irresistible. He, therefore, conjured the company to keep moving, whatever pain it might cost them, and whatever relief they might be promised by an inclination to rest, 'Whoever sits down,' said he, 'will sleep: and whoever sleeps, will wake no more.' Thus at once admonished and alarmed, they set forward; but while they were still upon the naked rock, and before they had got among the bushes, the cold became suddenly so intense as to produce the effects that had been most dreaded. Dr Solander himself was the first who felt the inclination, against which he had warned others, irresistible; and insisted upon being suffered to lie down. Mr Banks entreated and remonstrated in vain; down he lay upon the ground, although it was covered with snow, and it was with great difficulty that his friend kept him from sleeping. Richmond, also one of the black servants, began to linger, having suffered from the cold in the same man

ner as the Doctor. Mr Banks, therefore, sent five of the company, among whom, was Mr Buchan, forward, to get a fire ready at the first convenient place they could find; and himself, with four others, remained with the Doctor and Richmond, whom, partly by persuasion and entreaty, and partly by force, they brought on; but when they had got through the greatest part of the birch and swamp, they both declared they could go no farther. Mr Banks again had recourse to entreaty and expostulation, but they produced no effect. When Richmond was told that, if he did not go on, he would in a short time be frozen to death, he answered, that he desired nothing but to lie down and die. The Doctor did not so explicitly renounce his life; he said he was willing to go on, but that he must first take some sleep, though he had before told the company, to sleep was to perish. Mr Banks and the rest found it impossible to carry them; and there being no remedy, they were both suffered to sit down, being partly supported by the bushes; and in a few minutes they fell into a profound sleep. Soon after, some of

the people who had been sent forward, returned, with the welcome news that a fire was kindled about a quarter of a mile farther on the way. Mr Banks then endeavoured to awake Dr Solander, and happily succeeded. But though he had not slept five minutes, he had almost lost the use of his limbs, and the muscles were so shrunk, that the shoes fell from his feet: he consented to go forward with such assistance as could be given him, but no attempts to relieve poor Richmond were successful."

It is hardly necessary to say any thing about the treatment of such cases. If a person is found in a state of torpor from cold, common sense points out the necessity of bringing him within the influence of warmth. When, however, the limbs, &c., are frost-bitten, heat must be very cautiously applied, lest reaction, ensuing in such debilitated parts, might induce gangrene. Brisk friction with a cold towel, or even with snow, as is the custom in Russia, should, in the first instance, be had recourse to. When by this means the circulation is restored, and motion and feel-

ing communicated to the parts, the heat may be gradually increased, and the person wrapped in blankets, and allowed some stimulus internally, such as a little negus, or spirits and water. This practice should be adopted from the very first, when the parts are not frost-bitten; but when such is the case, the stimulating system requires to be used with great caution, and we must proceed carefully, proportioning the stimulus to the particular circumstances of the case.

If a person is unfortunate enough to be overtaken in a snow storm, and has no immediate prospect of extrication, he should, if the cold is very great, and the snow deep, sink his body as much as possible in the latter, leaving only room for respiration. By this plan, the heat of the body is much better preserved than when exposed to the influence of the atmosphere, and life has a greater chance of being saved; for the temperature of the snow is not lower than that of the surrounding air, while its power of absorbing caloric is much less. It is on this principle that sheep live for such a length of time enveloped

in snow wreaths, while, had they been openly exposed, for a much less period, to a similar degree of cold, death would inevitably have ensued.

One of the best methods to prevent the limbs from being frost-bitten in intensely cold weather, is to keep them continually in motion. Such was the method recommended by Xenophon to the Greek troops, in the memorable "Retreat of the Ten Thousand," conducted by that distinguished soldier and historian.

CHAPTER XIII.

TRANCE

THERE is some analogy between suspended animation and sleep. It is not so striking, however, as to require any thing like a lengthened discussion of the former, which I shall only consider in so far as the resemblance holds good between it and sleep. I have already spoken of that suspension of the mind, and of some of the vital functions, which occurs in consequence of intense cold: but there are other varieties, not less singular in their nature. The principal of these are, fainting, apoplexy, hanging, suffocation, drowning, and, especially, trance. When complete fainting takes place, it has many of the characters of death—the countenance being pale,

moist, and clammy; the body cold; the respiration extremely feeble; the pulsation of the heart apparently at an end; while the mind is in a state of utter abeyance. It is in the latter respect only, that the resemblance exists between syncope and sleep; in every other they are widely different. The same rule holds with regard to apoplexy, in which a total insensibility, even to the strongest stimuli, takes place, accompanied also with mental torpor. In recoverable cases of drowning, hanging, and suffocation, a similar analogy prevails, only in a much feebler degree; the faculties of the mind being for the time suspended, and the actual existence of the vital spark only proved by the subsequent restoration of the individual to consciousness and feeling.

The most singular species, however, of suspended animation is that denominated catalepsy, or trance. No affection to which the animal frame is subject, is more remarkable than this. During its continuance, the whole body is cold, rigid, and inflexible; the countenance without colour; the eyes fixed and

motionless: while breathing and the pulsation of the heart are, to all appearance, at an end. The mental powers, also, are generally suspended, and participate in the universal torpor which pervades the frame. In this extraordinary condition, the person may remain for several days, having all, or nearly all, the characteristics of death impressed upon him. Such was the case with the celebrated Lady Russel, who only escaped premature interment by the affectionate prudence of her husband; and other well authenticated instances of similar preservation from burying alive have been recorded.

The nature of this peculiar species of suspended animation, seems to be totally unknown; for there is such an apparent extinction of every faculty essential to life, that it is inconceivable how existence should go on during the continuance of the fit. There can be no doubt, however, that the suspension of the heart and lungs is more apparent than real. It is quite certain that the functions of these organs must continue, so as to sustain life, although in so feeble a manner as not to come

under the cognizance of our senses. The respiration, in particular, is exceedingly slight; for a mirror, held to the mouth of the individual, receives no tarnish whatever from his breath. One fact seems certain, that the functions of the nervous system are wholly suspended, with the exception of such a faint portion of energy, as to keep up the circulatory and respiratory phenomena: consciousness, in a great majority of cases, is abolished; and there is nothing wanting to indicate the unquestionable presence of death, but that decomposition of the body which invariably follows this state, and which never attends the presence of vitality.

The remote causes of trance are hidden in much obscurity; and, generally, we are unable to trace the affection to any external circumstance. It has been known to follow a fit of terror. Sometimes it ensues after hysteria, epilepsy, or other spasmodic diseases, and is occasionally an accompaniment of menorrhagia and intestinal worms. Nervous and hypochondriac patients are the most subject to its attacks; but sometimes it occurs when there

is no disposition of the kind, and when the person is in a state of the most seeming good health.

“ A girl named Shorigny, about twenty-five years old, residing at Paris, had been for two years past subject to hysteria. On the twenty-eighth day after she was first attacked, the physician who came to visit her was informed that she had died during the night, which much surprised him, as, when he had left her the night before, she was better than usual. He went to see her, in order to convince himself of the fact; and, on raising the cloth with which she was covered, he perceived that though her face was very pale, and her lips discoloured, her features were not otherwise in the least altered. Her mouth was open, her eyes shut, and the pupils very much dilated; the light of the candle made no impression on them. There was no sensible heat in her body; but it was not cold and flabby, like corpses in general. The physician returned the next day, determined to see her again before she was buried; and, finding that she had not become cold, he gave orders that

the coffin should not be soldered down until putrefaction had commenced. He continued to observe her during five days, and at the end of that period, a slight movement was observed in the cloth which covered her. In two hours, it was found that the arm had contracted itself; she began to move; and it was clear that it had only been an apparent death. The eyes soon after were seen opened, the senses returned, and the girl began gradually to recover. This is an extraordinary, but incontestable fact: the girl is still alive, and a great many persons who saw her while she was in the state of apathy described, are ready to satisfy the doubt of any one who will take the trouble to inquire.”*

The case which follows is from the *Canton Gazette*, and is not less curious:—

“ On the western suburbs of Canton, a person named Le bought as a slave-woman a girl named Leaning. At the age of twenty-one, he sold her to be a concubine to a man named Wong. She had lived with him three years,

* Mentor.

About six months ago, she became ill, in consequence of a large imposthume on her side, and on the 25th of the present moon died. She was placed in a coffin, the lid of which remained unfastened, to wait for her parents to come and see the corpse, that they might be satisfied she died a natural death. On the 28th, while carrying the remains to be interred in the north side of Canton, a noise or voice was heard proceeding from the coffin; and, on removing the covering, it was found the woman had come to life again. She had been supposed dead for three days."

The case of Colonel Townsend, however, is much more extraordinary than either of the above-mentioned. This gentleman possessed the remarkable faculty of throwing himself into a trance at pleasure. The heart ceased, apparently, to throb at his bidding, respiration seemed at an end, his whole frame assumed the icy chill and rigidity of death; while his face became colourless and shrunk, and his eye fixed, glazed, and ghastly: even his mind ceased to manifest itself; for during the trance it was as utterly devoid of consciousness as his

body of animation. In this state he would remain for hours, when these singular phenomena wore away, and he returned to his usual condition. Medical annals furnish no parallel to this extraordinary case. Considered whether in a physiological or metaphysical point of view, it is equally astonishing and inexplicable.

A variety of stories are related of people having had circumstances revealed to them in a trance, of which they were ignorant when awake: most of these tales have their origin in fiction, although there is no reason why they may not be occasionally true; as the mind, instead of being in torpor, as is very generally the case, may exist in a state analogous to that of dreaming, and may thus, as in a common dream, have long forgotten events impressed upon it.

The following case exhibits a very singular instance, in which the usual characteristic—a suspension of the mental faculties—was wanting. It seems to have been a most complete instance of suspended volition, wherein the mind was active, while the body refused to

obey its impulses, and continued in a state of apparent death.

“ A young lady, an attendant on the Princess —, after having been confined to her bed, for a great length of time, with a violent nervous disorder, was at last, to all appearance, deprived of life. Her lips were quite pale, her face resembled the countenance of a dead person, and the body grew cold.

“ She was removed from the room in which she died, was laid in a coffin, and the day of her funeral fixed on. The day arrived, and, according to the custom of the country, funeral songs and hymns were sung before the door. Just as the people were about to nail on the lid of the coffin, a kind of perspiration was observed to appear on the surface of her body. It grew greater every moment; and at last a kind of convulsive motion was observed in the hands and feet of the corpse. A few minutes after, during which time fresh signs of returning life appeared, she at once opened her eyes and uttered a most pitiable shriek. Physicians were quickly procured, and in the course

of a few days she was considerably restored, and is probably alive at this day.

“The description which she gave of her situation is extremely remarkable, and forms a curious and authentic addition to psychology.

“She said it seemed to her, as if in a dream, that she was really dead; yet she was perfectly conscious of all that happened around her in this dreadful state. She distinctly heard her friends speaking, and lamenting her death, at the side of her coffin. She felt them pull on the dead clothes, and lay her in it. This feeling produced a mental anxiety which was indescribable. She tried to cry, but her soul was without power, and could not act on her body. She had the contradictory feeling as if she were in her body and yet not in it, at one and the same time. It was equally impossible for her to stretch out her arm, or to open her eyes, or to cry, although she continually endeavoured to do so. The internal anguish of her mind was, however, at its utmost height when the funeral hymns began to be sung, and when the lid of the coffin was about to be nailed on. The thought that she

was to be buried alive, was the one that gave activity to her soul, and caused it to operate on her corporeal frame.*

The following is different from either of the foregoing; I have given it on account of its singularity, although it does not altogether come under the denomination of trance.

George Groatzhi, a Polish soldier, deserted from his regiment in the harvest of the year 1677. He was discovered, a few days after, drinking and making merry in a common ale-house. The moment he was apprehended, he was so much terrified that he gave a loud shriek, and was immediately deprived of the power of speech. When brought to a court-martial, it was impossible to make him articulate a word; nay, he then became as immovable as a statue, and appeared not to be conscious of any thing that was going forward. In the prison, to which he was conducted, he neither eat nor drank. The officers and priests at first threatened him, and afterwards endeavoured to soothe and calm him, but all

* Psychological Magazine, vol. v. part iii. page 15.

their efforts were in vain. He remained senseless and immovable. His irons were struck off, and he was taken out of prison, but he did not move. Twenty days and nights were passed in this way, during which he took no kind of nourishment; he then gradually sunk and died.*

It would be out of place to enter here into a detail of the medicinal management of the first mentioned varieties of suspended animation, such as drowning, strangulation, &c., &c.; and with regard to the treatment of trance, properly so called, a very few words will suffice.

If we have reason to suppose that we know the cause of the affection, that, of course, must be removed whenever practicable. We must then employ stimuli to arouse the person from his torpor, such as friction, the application of sternutatories and volatile agents to the nostrils, and electricity. The latter remedy is likely to prove a very powerful one, and should always be had recourse to when other

* Bonetus, *Medic. Septentrion.* lib. i. sec. xvi. cap. 6.

means fail. I should think the warm bath might be advantageously employed. When even these remedies do not succeed, we must trust to time. So long as the body does not run into decay, after a case of suspended animation arising without any very obvious cause, interment should not take place; for it is possible that life may exist, although, for the time being, there is every appearance of its utter extinction. By neglecting this rule, a person may be interred alive; nor can there be a doubt that such dreadful mistakes have occasionally been committed, especially in France, where it is customary to inter the body twenty-four hours after death. Decomposition is the only infallible mark that existence is at an end, and that the grave has triumphed.

CHAPTER XIV.

VOLUNTARY WAKING DREAMS.

THE young and the imaginative are those who indulge most frequently in waking dreams. The scenes which life presents do not come up to the desires of the heart; and the pencil of fancy is accordingly employed in depicting others more in harmony with its own designs. Away into the gloomy back-ground goes reality with its stern and forbidding hues, and forward, in colours more dazzling than those of the rainbow, start the bright and airy phantoms of imagination. "How often," observes Dr Good,* "waking to the roar of the midnight tempest, while dull and gluttonous

* Book of Nature, vol. iii. p. 422.

indolence snores on in happy forgetfulness, does the imagination of those who are thus divinely gifted mount the dizzy chariot of the whirlwind, and picture evils that have no real existence ; now figuring to herself some neat and thrifty cottage where virtue delights to reside, she sees it swept away in a moment by the torrent, and despoiled of the little harvest just gathered in ; now following the lone traveller in some narrow and venturous pathway, over the edge of the Alpine precipices, where a single slip is instant destruction, she tracks him alone by fitful flashes of lightning, and at length, struck by the flash, she beholds him tumbling headlong from rock to rock, to the bottom of the dread abyss, the victim of a double death. Or possibly she takes her stand on the jutting foreland of some bold, terrific coast, and eyes the foundering vessel straight below ; she mixes with the spent and despairing crew ; she dives into the cabin, and singles out, perhaps from the rest, some lovely maid, who, in all the bloom of recovered beauty, is voyaging back to her native land from the healing airs of a foreign climate, in

thought just bounding over the scenes of her youth, or panting in the warm embraces of a father's arms." Such are waking dreams; and there are few who, at some happy moment or other, have not yielded to their influence. Often under the burning clime of India, or upon the lonely banks of the Mississippi, has the stranger let loose the reins of his imagination, calling up before him the mountains of his own beloved country, his native streams, and rocks and valleys, so vividly, that he was transported back into the midst of them, and lived over again the days of his youth. Or the waking dream may assume a more selfish character. If the individual pines after wealth, his mind may be filled with visions of future opulence. If he is young and unmarried, he may conjure up the form of a lovely female, may place her in a beautiful cottage by the banks of some romantic stream, may love her with unfathomable affection, and become the fondest and most happy of husbands. The more completely a person is left to solitude, the more likely is his imagination to indulge in such fancies. We seldom build castles in

the air in the midst of bustle, or when we have any thing else to think of. Waking dreams are the luxuries of an otherwise unemployed mind—the aristocratic indulgences of the intellect. As people get older and more conversant with life in all its diversified features, they are little inclined to indulge in such visions. They survey events with the eye of severe truth, amuse themselves with no impracticable notions of fancied happiness, and are inclined to take a gloomy, rather than a flattering, view of the future. With youthful and poetical minds, however, the case is widely different. Much of that portion of their existence, not devoted to occupation, is a constant dream. They lull themselves into temporary happiness with scenes which they know only to exist in their own imagination; but which are nevertheless so beautiful, and so much in harmony with every thing their souls desire, that they fondly clasp at the illusion, and submit themselves unhesitatingly to its spell.

These curious states of mind may occur at any time; but the most common periods of

their accession are shortly after lying down, and shortly before getting up. Men, especially young men, of vivid, sanguine, imaginative temperaments, have dreams of this kind almost every morning and night. Instead of submitting to the sceptre of sleep, they amuse themselves with creating a thousand visionary scenes. Though broad awake, their judgment does not exercise the slightest sway, and fancy is allowed to become lord of the ascendant. Poets are notorious castle-builders, and poems are, in fact, merely waking dreams—at least their authors were under the hallucination of such dreams while composing. Milton's mind, during the composition of *Paradise Lost*, must have existed chiefly in the state of a sublime waking dream; so must Michael Angelo's while painting the Sistine Chapel; and, Thorwaldson's, while designing the triumphs of Alexander. In waking dreams, whatever emotion prevails has a character of exaggeration, at least in reference to the existing condition of the individual. He sees every thing through the serene atmosphere of imagination, and imbues the most trite circumstances with

poetical colouring. The aspect, in short, which things assume, bears a strong resemblance to that impressed upon them by ordinary dreams, and differs chiefly in this, that, though verging continually on the limits of extravagance, they seldom transcend possibility.

CHAPTER XV.

SPECTRAL ILLUSIONS.

OF the various faculties with which man is endowed, those which bring him into communication with the material world, constitute an important class. The organs of these faculties—termed perceptive—are situated in the middle and lower parts of the forehead. Their function is to perceive and remember the existence, phenomena, qualities, and relations of external objects. *Individuality* takes cognizance of the existence of material bodies; *Eventuality*, of their motions or actions; *Form*, of their shape; *Size*, of their magnitude and proportions; *Weight*, of the resistance which they offer to a moving or restraining power; *Colouring*, of their colours; and *Locality*, of

their relative position. *Time* and *Number* perceive and remember duration and numbers; *Language* takes cognizance of artificial signs of feeling and thought: and *Order* delights in regularity and arrangement. In ordinary circumstances, the mode of action of these organs is this. If any object—a horse for example—be placed before us, the rays of light reflected from its surface to our eye, form a picture of the animal upon the retina or back part of that organ. This picture gives rise to what, for want of more precise language, is called an impression, which is conveyed by the optic nerve to the cerebral organs already mentioned; and by them, in reality, the horse is perceived. The eye and optic nerve, it will be observed, do no more than transmit the impression from without, so as to produce that state of the internal organs which is accompanied by what is termed perception or *sensation*. When the horse is withdrawn, the impression still remains, to a certain extent, in the brain; and though the animal is not actually perceived, we still remember its appearance, and can almost imagine that it is

before us. This faint semi-perception is called an *idea*, and differs from sensation only in being less vivid. The brain is more highly excited when it perceives a sensation, than when an idea only is present; because, in the former case, there is applied, through the medium of the senses, a stimulus from without, which, in the latter case, is not present. If, however, the brain be brought by *internal* causes to a degree of excitement, which, in general, is the result only of external impressions, ideas not less vivid than sensations ensue; and the individual has the same consciousness as if an impression were transmitted from an actual object through the senses. In other words, the brain, in a certain state, perceives external bodies; and any cause which induces that state, gives rise to a like perception, independently of the usual cause—the presence of external bodies themselves. The chief of these internal causes is inflammation of the brain; and when the organs of the perceptive faculties are so excited—put into a state similar to that which follows actual impressions from without—the result is a series

of false images or sounds, which are often so vivid as to be mistaken for realities. During sleep, the perceptive organs seem to be peculiarly susceptible of such excitement. In dreaming, for instance, the external world is inwardly represented to our minds with all the force of reality: we speak and hear as if we were in communication with actual existences. Spectral illusions are phenomena strictly analogous; indeed, they are literally nothing else than involuntary waking dreams.

In addition to the occasional cause of excitement of the perceptive organs above alluded to, there is another, the existence of which is proved by numerous facts, though its mode of action is somewhat obscure. I allude to a large development of the organ of *Wonder*. Individuals with such a development are both strongly inclined to believe in the supernaturality of ghosts, and peculiarly liable to be visited by them. This organ is large in the head of Earl Grey, and he is said to be haunted by the apparition of a bloody head. Dr Gall mentions, that in the head of Dr Jung Stilling, who saw visions, the organ was

very largely developed. A gentleman who moves in the best society in Paris, once asked Gall to examine his head. The Doctor's first remark was, "You sometimes see visions, and believe in apparitions." The gentleman started from his chair in astonishment, and said that he *had* frequent visions; but never till that moment had he spoken on the subject to any human being, through fear of being set down as absurdly credulous. How a large development of *Wonder* produces the necessary excitement of the perceptive organs is unknown, but the fact seems indisputable.

In former times, individuals who beheld visions, instead of ascribing them to a disordered state of the brain, referred them to outward impressions, and had a false conviction of the presence of supernatural beings. Hence the universal belief in ghosts which in these periods prevailed, even among the learned, and from which the illiterate are not yet entirely exempt.

We read in history of people being attended by familiar spirits: such was the case with Socrates in ancient, and with the Poet Tasso,

in modern times; their familiar spirits were merely spectral illusions. "At Bissaccio, near Naples," says Mr Hoole, in his account of the illustrious author of the *Jerusalem Delivered*, "Manso had an opportunity of examining the singular effects of Tasso's melancholy, and often disputed him concerning a *familiar spirit* which he pretended conversed with him: Manso endeavoured in vain to persuade his friend that the whole was the illusion of a disturbed imagination; but the latter was strenuous in maintaining the reality of what he asserted, and to convince Manso, desired him to be present at one of the mysterious conversations. Manso had the complaisance to meet him next day, and while they were engaged in discourse, on a sudden he observed that Tasso kept his eyes fixed on a window, and remained in a maner immovable: he called him by his name, but received no answer; at last Tasso cried out, 'There is the friendly spirit that is come to converse with me; look! and you will be convinced of all I have said.'

"Manso heard him with surprise; he looked, but saw nothing except the sunbeams darting

through the window; he cast his eyes all over the room, but could perceive nothing; and was just going to ask where the pretended spirit was, when he heard Tasso speak with great earnestness, sometimes putting questions to the spirit, sometimes giving answers; delivering the whole in such a pleasing manner, and in such elevated expressions, that he listened with admiration, and had not the least inclination to interrupt him. At last the uncommon conversation ended with the departure of the spirit, as appeared by Tasso's own words, who, turning to Manso, asked him if his doubts were removed. Manso was more amazed than ever; he scarce knew what to think of his friend's situation, and waved any further conversation on the subject."

The visions of angels, and the communications from above, with which religious enthusiasts are often impressed, arise from the operation of spectral illusions. They see forms and hear sounds which have no existence; and, believing in the reality of such impressions, consider themselves highly favoured by the Almighty. These feelings prevailed

very much during the persecutions in Scotland. Nothing was more common than for the Covenanter by the lonely hill side to have what he supposed a special message from God, and even to see the angel who brought it standing before him, and encouraging him to be steadfast in his religious principles. Much of the crazy fanaticism exhibited by the disciples of Campbell and Irving, undoubtedly arises from a similar cause; and it is probable that both of these individuals see visions and hear supernatural voices, as well as many of their infatuated followers.

Various causes may so excite the brain as to produce these phantasmata, such as great mental distress, sleeplessness, nervous irritation, religious excitement, fever, epilepsy, opium, delirium tremens, excessive study, and dyspepsia. I have known them to arise without the apparent concurrence of any mental or bodily distemper. I say *apparent*, for it is very evident there must be some functional derangement, however much it may be hidden from observation. An ingenious friend has related to me a case of this kind which occurred

in his own person. One morning, while lying in bed broad awake, and, as he supposed, in perfect health, the wall opposite to him appeared to open at its junction with the ceiling, and out of the aperture came a little uncouth, outlandish figure, which descended from the roof, squatted upon his breast, grinned at him maliciously, and seemed as if pinching and pummelling his sides. This illusion continued for some time, and with a timorous subject might have been attended with bad consequences ; but he referred it at once to some disordered state of the stomach under which he imagined he must have laboured at the time, although he had no direct consciousness of any such derangement of this organ. The same gentleman has related to me the case of one of his friends which attracted much notice at the time it happened, from the melancholy circumstances that attended it. It is an equally marked instance of hallucination arising without the individual being conscious of any physical cause by which it might be occasioned. It is as follows:—

Mr H. was one day walking along the

street, apparently in perfect health, when he saw, or supposed he saw, his acquaintance, Mr C., walking before him. He called aloud to the latter, who, however, did not seem to hear him, but continued moving on. Mr H. then quickened his pace for the purpose of overtaking him; the other increased his also, as if to keep ahead of his pursuer, and proceeded at such a rate that Mr H. found it impossible to make up to him. This continued for some time, till, on Mr C. coming to a gate, he opened it, passed in, and slammed it violently in Mr H.'s face. Confounded at such treatment, the latter instantly opened the gate, looked down the long lane into which it led, and, to his astonishment no one was visible. Determined to unravel the mystery, he went to Mr C.'s house; and what was his surprise when he learned that he was confined to bed, and had been so for several days. A week or two afterwards, these gentlemen chanced to meet in the house of a common friend, when Mr H. mentioned the circumstance, and told Mr C. jocularly that he had seen his *wraith*, and that, as a natural consequence, he would

soon be a dead man. The person addressed laughed heartily, as did the rest of the company, but the result turned out to be no laughing matter; for, in a very few days, Mr C. was attacked with putrid sore throat, and died; and within a very short period of his death Mr H. was also in the grave.

Some of the most vivid instances of spectral illusion are those induced by opium. Several of the "English Opium-Eater's" visions were doubtless of this nature. Dr Abercrombie relates a striking instance of the kind which occurred to the late Dr Gregory. "He had gone to the north country by sea to visit a lady, a near relation, in whom he felt deeply interested, and who was in an advanced state of consumption. In returning from the visit, he had taken a moderate dose of laudanum, with the view of preventing sea-sickness, and was lying on a couch in the cabin, when the figure of the lady appeared before him in so distinct a manner that her actual presence could not have been more vivid. He was quite awake, and fully sensible that it was a phantasm produced by the opiate, along with his intense

mental feeling; but he was unable by any effort to banish the vision."* Indeed, any thing on which the mind dwells excessively may, by exciting the perceptive organs, give rise to spectral illusions. It is to this circumstance that the bereaved husband sees the image of a departed wife, to whom he was fondly attached—that the murderer is haunted by the apparition of his victim—and that the living with whom we are familiar seem to be presented before our eyes, although at a distance from us. Dr Conolly relates the case of a gentleman, who, when in danger of being wrecked near the Eddystone light-house, saw the images of his whole family.

These illusive appearances sometimes occur during convalescence from diseases. In the summer of 1832, a gentleman in Glasgow, of dissipated habits, was seized with cholera, from which he recovered. His recovery was unattended with any thing particular, except the presence of phantasmata—consisting of human figures about three feet high, neatly dressed

* *Inquiries concerning the Intellectual Powers*, p. 357.

in pea-green jackets, and knee-breeches of the same colour. Being a person of a superior mind, and knowing the cause of the illusions, they gave him no alarm, although he was very often haunted by them. As he advanced in strength the phantoms appeared less frequently, and diminished in size, till at last they were not taller than his finger. One night, while seated alone, a multitude of these Lilliputian gentlemen made their appearance on his table, and favoured him with a dance; but being at the time otherwise engaged, and in no mood to enjoy such an amusement, he lost temper at the unwelcome intrusion of his pigmy visitors, and striking his fist violently upon the table, he exclaimed, in a violent passion, "Get about your business you little impertinent rascals! What the devil are you doing here?" when the whole assembly instantly vanished, and he was never troubled with them more.

It generally happens that the figures are no less visible when the eyes are closed than when they are open. An individual in the west of Scotland, whose case is related in the

Phrenological Journal,* whenever he shut his eyes or was in darkness, saw a procession move before his mind as distinctly as it had previously done before his eyes. Some years ago, a farmer from the neighbourhood of Hamilton informed me, with feelings of great horror, that he had frequently the vision of a hearse drawn by four black horses, which were driven by a black driver. Not knowing the source of this illusion he was rendered extremely miserable by it; and, to aggravate his unhappiness, was regarded by the ignorant country people, to whom he told the story, as having been guilty of some grievous crime. This vision was apparent to him chiefly by night, and the effect was the same whether his eyes were open or shut. Indeed, so little are these illusions dependent on sight, that the blind are frequently subject to them. A respected elderly gentleman, a patient of my own, who was afflicted with loss of sight, accompanied by violent headaches and severe dyspeptic symptoms, used to have the image of a black cat

* Vol. ii. p. 111.

presented before him, as distinctly as he could have seen it before he became blind. He was troubled with various other spectral appearances, besides being subject to illusions of sound equally remarkable; for he had often the consciousness of hearing music so strongly impressed upon him, that it was with difficulty his friends could convince him it was purely ideal.

Considering the age in which Bayle lived, his notions of the true nature of spectral illusions were wonderfully acute and philosophical. Indeed, he has so well described the theory of apparitions, that the modern phrenological doctrine on this point seems little more than an expanded version of his own. "A man," says he, "would not only be very rash, but also very extravagant, who should pretend to prove that there never was any person that imagined he saw a spectre; and I do not think that the most obstinate and extravagant unbelievers have maintained this. All they say, comes to this: that the persons who have thought themselves eye-witnesses of the apparition of spirits had a disturbed imagination.

They confess that there are *certain places in our brain* that, being affected in a certain manner, *excite the image of an object which has no real existence out of ourselves*, and make the man, whose brain is thus modified, believe he sees, at two paces distance, a frightful spectre, a hobgoblin, a threatening phantom. The like happens in the heads of the most incredulous, either in their sleep, or in the paroxysms of a violent fever. Will they maintain after this, that it is impossible for a man awake, and not in a delirium, to receive *in certain places of his brain an impression* almost like that which, by the law of nature, is connected with the appearance of a phantom." In one of Shenstone's Essays, entitled, "An Opinion of Ghosts," the same theory is clearly enunciated.

It is worthy of remark, that the phenomena of apparitions are inconsistent with the prevalent theory that the brain is a single organ, with every part of which each faculty is connected. Were this theory sound, the same cause that vivifies the perceptive faculties must also vivify, or excite to increased action,

the propensities, sentiments, and reflecting powers. This, however, is by no means the case.

The case of Nicolai, the Prussian bookseller, which occurred in the beginning of 1791, is one of the most remarkable instances of spectral illusion on record. "I saw," says he, "in a state of mind completely sound, and—after the first terror was over—with perfect calmness, for nearly two months, almost constantly and involuntarily, a vast number of human and other forms, and even heard their voices, though all this was merely the consequence of a diseased state of the nerves, and an irregular circulation of the blood." "When I shut my eyes, these phantasms would sometimes vanish entirely, though there were instances when I beheld them with my eyes closed; yet when they disappeared on such occasions, they generally returned when I opened my eyes. I conversed sometimes with my physician and my wife of the phantasms which at the moment surrounded me; they appeared more frequently walking than at rest; nor were they constantly present. They

frequently did not come for some time, but always reappeared for a longer or shorter period either singly or in company, the latter, however, being most frequently the case. I generally saw human forms of both sexes; but they usually seemed not to take the smallest notice of each other, moving as in a market-place, where all are eager to press through the crowd; at times, however, they seemed to be transacting business with each other. I also saw, several times, people on horseback, dogs and birds. All these phantasms appeared to me in their natural size, and as distinct as if alive, exhibiting different shades of carnation in the uncovered parts, as well as in different colours and fashions in their dresses, though the colours seemed somewhat paler than in real nature; none of the figures appeared particularly terrible, comical, or disgusting, most of them being of an indifferent shape, and some presenting a pleasing aspect."

Perhaps the most remarkable visionary, of whom we have any detailed account, was Blake the painter. This extraordinary man not only believed in his visions, but could often

call up at pleasure whatever phantasms he wished to see; and so far from their being objects of annoyance, he rather solicited than wished to avoid their presence. He was in the habit of conversing with angels, demons, and heroes, and taking their likenesses; for they proved most obedient sitters, and never showed any aversion to allow him to transfer them to paper. "His mind," says Mr Cunningham, "could convert the most ordinary occurrences into something mystical and supernatural." "Did you ever see a fairy's funeral, Madam?" he once said to a lady who happened to sit by him in company, 'Never, Sir!' was the answer. 'I have,' said Blake, 'but not before last night. I was walking alone in my garden, there was great stillness among the branches and flowers, and more than common sweetness in the air; I heard a low and pleasant sound, and knew not whence it came. At last I saw the broad leaf of a flower move, and underneath I saw a procession of creatures of the size and colour of green and grey grasshoppers, bearing a body laid out on a rose leaf, which they buried with songs, and then

disappeared. It was a fairy funeral.” On being asked to draw the likeness of Sir William Wallace, that hero immediately stood before him, and he commenced taking his portrait. “Having drawn for some time with the same care of hand and steadiness of eye, as if a living sitter had been before him, Blake stopped suddenly and said, ‘I cannot finish him—Edward the First has stepped in between him and me.’ ‘That’s lucky,’ said his friend, ‘for I want the portrait of Edward too.’ Blake took another sheet of paper and sketched the features of Plantagenet; upon which his majesty politely vanished, and the artist finished the head of Wallace.”* The greater part of his life was passed in beholding visions and in drawing them. On one occasion he saw the ghost of a flea and took a sketch of it. No conception was too strange or incongruous for his wild imagination, which totally overmastered his judgment, and made him mistake the chimeras of an excited brain for realities.

What is called the *Second Sight*, originated,

* Cunningham’s *Lives of the British Painters, Sculptors, and Architects*, Vol. ii., *Life of Blake*.

in most cases, from spectral illusion ; and the seers of whom we so often read, were merely individuals visited by these phantoms. The Highland mountains, and the wild lawless habits of those who inhabited them, were peculiarly adapted to foster the growth of such impressions in imaginative minds ; and, accordingly, nothing was more common than to meet with persons who not only fancied they saw visions, but on the strength of this belief, laid claim to the gift of prophecy. The more completely the mind is abstracted from the bustle of life ; the more solitary the district in which the individual resides ; and the more romantic and awe-inspiring the scenes that pass before his eyes, the greater is his tendency to see visions, and to place faith in what he sees. A man, for instance, with the peculiar temperament which predisposes to see, and believe in, spectral illusions, is informed that his chieftain and clan have set out on a dangerous expedition. Full of the subject, he forces their images before him—sees them engaged in fight—beholds his chieftain cut down by the claymore of an enemy—the clans-

men routed and dispersed, their houses destroyed, their cattle carried off. This vision he relates to certain individuals. If, as is not unlikely, it is borne out by the event, his prophecy is spread far and wide, and looked upon as an instance of the second sight; while, should nothing happen, the story is no more thought of by those to whom it was communicated. In some instances, it is probable that the accidental fulfilment of an ordinary dream was regarded as Second Sight.

The belief in fairies, no doubt, had also its origin in spectral illusions. In the days of ignorance and superstition nothing was more easy than for an excited brain to conjure up those tiny forms, and see them perform their gambols upon the green sward beneath the light of the moon.

The dimensions of the figures which are exhibited in spectral illusions vary exceedingly. Sometimes they appear as miniatures, sometimes of the size of life, at other times of colossal proportions. The same differences apply to their colour. In one case they are pale, misty, transparent; in another black, red,

blue, or green. Sometimes we have them fantastically clothed in the costume of a former age, sometimes in that of our own. Now they are represented grinning, now weeping, now in smiles. "White or grey ghosts," says Mr Simpson, "result from excited *Form*, with quiescent *Colouring*, the transparent cobweb effect being colourless. Pale spectres, and shadowy yet coloured forms, are the effect of partially excited *Colouring*. Tall ghosts and dwarf goblins, are the illusions of over-excited *Size*." The jabbering of apparitions arises from an excited state of that part of the brain which gives us cognizance of sounds. This explanation seems highly probable, or rather quite satisfactory. There are points, however, which it is likely no one will ever be able to explain. Why, for instance, should the disordered brain conjure up *persons* and *faces* rather than *trees* and *houses*? why should a ghost be dressed in *red* rather than *blue*, and why should it *smile* rather than *grin*? These are minutix beyond the reach of investigation, at least in the present state of our knowledge.

Mr Simpson, in the second volume of the

Phrenological Journal, has published a case of spectral illusion, which, for singularity and interest, equals any thing of the same kind which has hitherto been recorded. The subject of it was a young lady under twenty years of age, of good family, well educated, free from any superstitious fears, in perfect bodily health, and of sound mind. She was early subject to occasional attacks of such illusions, and the first she remembered was that of a carpet which descended in the air before her, then vanished away. After an interval of some years, she began to see human figures in her room as she lay wide awake in bed. These figures were *whitish* or rather *grey*, and *transparent* like *cobweb*, and generally above the size of life. At this time she had acute headaches, very singularly confined to one small spot of the head. On being asked to indicate the spot, she touched, with her fore-finger and thumb, each side of the root of the nose, the commencement of the eyebrows, and the spot immediately over the top of the nose, the ascertained seats of *Form*, *Size*, and *Lower Individuality*. On being asked if the pain

was confined to these spots, she answered that some time afterwards it extended to the right and left, along the eyebrows, and a little above them, and completely round the eyes, which felt as if they would burst from their sockets. On this taking place the visions varied. The organs of *Weight, Colouring, Order, Number,* and *Locality,* were affected, and the phantasmata assumed a change corresponding to the irritated condition of these parts. "The whitish or cobweb spectres assumed the natural *colour* of the objects, but they continued often to present themselves, though not always, above the *size* of life." "*Colouring* being over-excited, began to occasion its specific and fantastical illusions. Bright spots, like stars on a back ground, filled the room in the dark, and even in day-light; and sudden, and sometimes gradual, illumination of the room during the night took place, so that the furniture in it became visible. Innumerable balls of fire seemed one day to pour like a torrent out of one of the rooms of the house down the staircase. On one occasion, the pain between the eyes, and along the lower ridge of the brow,

struck her suddenly with great violence—when, *instantly*, the room filled with stars and bright spots. On attempting, on that occasion, to go to bed, she said she was conscious of an *inability to balance herself, as if she had been tipsy*, and she fell, having made repeated efforts to seize the bed-posts; which, in the most unaccountable manner eluded her grasp *by shifting its place*, and also by presenting her with *a number of bed-posts instead of one*. If the organ of *Weight*, situated between *Size* and *Colouring*, be the organ of the instinct to preserve, and power of preserving, equilibrium, it must be the necessary consequence of the derangement of that organ to upset the balance of the person. Over-excited *Number* we should expect to produce multiplication of objects, and the first experience she had of this illusion, was the multiplication of the bed-posts, and subsequently of any inanimate object she looked at."

"For nearly two years, Miss S. L. was free from her frontal headaches, and—mark the coincidence—untroubled by visions or any other illusive perceptions. Some months ago,

however, all her distressing symptoms returned in great aggravation, when she was conscious of a want of health. The pain was more acute than before along the frontal bone, and round and in the eyeballs; and all the organs there situated recommenced their game of illusion. Single figures of absent and deceased friends were terribly real to her, both in the day and in the night, sometimes *cobweb*, but generally coloured. She sometimes saw friends on the street, who proved phantoms when she approached to speak to them; and instances occurred, where, from not having thus satisfied herself of the illusion, she affirmed to such friends that she had seen them in certain places, at certain times, when they proved to her the clearest *alibi*. The *confusion* of her spectral forms now addressed her.—(*Order affected.*) The oppression and perplexity were intolerable, when figures presented themselves before her in inextricable disorder, and still more when they changed—as with Nicolai—from whole figures to parts of figures—faces and half faces, and limbs—sometimes of inordinate size and dreadful deformity. One in-

stance of illusive *Disorder*, which she mentioned, is curious; and has the farther effect of exhibiting (what cannot be put in terms except those of) the derangement of the just perception of gravitation or equilibrium. (*Weight.*) One night as she sat in her bedroom, and was about to go to bed, a *stream* of spectres, persons' faces, limbs, in the most shocking confusion, seemed to her to pour into her room from the window, in the manner of a cascade! Although the cascade continued, apparently, in rapid descending motion; there was no accumulation of figures in the room, the supply unaccountably vanishing, after having formed the cascade. *Colossal* figures are her frequent visitors. (*Size.*)

In the fifth volume of the Phrenological Journal, page 319, a case is mentioned where the patient was tortured with horrid faces glaring at her, and approaching close to her in every possible aggravation of horror. "She was making a tedious recovery in child-bed when these symptoms troubled her. Besides the forms, which were of natural colour, though often bloody, she was perplexed by their

variation in size, from colossal to minute. She saw also entire human figures, but they were always as minute as pins, or even pin-heads, and were in great confusion and numbers." "She described the pain which *accompanied* her illusions, viz. acute pain in the upper part or root of the nose, the seat of the organ of *Form*, and all along the eyebrows, which takes in *Individuality, Form, Size, Weight, Colouring, Order, and Number.*" In the same volume, page 430, Mr Levison relates, that on asking an individual who saw apparitions, whether or not he felt pain at any part of his head, he answered, "that every time before he experienced this peculiar power of seeing figures, he invariably felt pain in and between his eyes, and, in short, all over the eyebrows." It does not appear, however, that pain is universally felt in such cases in the lower part of the forehead. Dr Andrew Combe informs me that, so far as he has observed, the pain, when it does exist, is more frequently in the exciting organ, generally *Wonder*.

Spectral illusions constitute the great pathognomonic sign of delirium tremens. In

this disease they are usually of a horrible, a disgusting, or a frightful nature; the person being irresistibly impressed with the notion that reptiles, insects, and all manner of vermin are crawling upon him, which he is constantly endeavouring to pick off—that he is haunted by hideous apparitions—that people are in the room preparing to murder and rob him, and so forth. In the following case, with which I have been favoured by Dr Combe, the illusive appearances were of a more pleasing kind than generally happen. “In a case,” says he, “of delirium tremens in an inn-keeper, about whom I was consulted, the spectral illusions continued several days, and had a distinct reference to a large and active cerebellum, (the organ of *Amativeness*) conjoined with *Wonder*. The man refused to allow me to look at a blister which had been placed between his shoulders, ‘because he could not take off his coat *before the ladies who were in the room.*’ When I assured him that there was nobody in the room he smiled at the joke, as he conceived it to be, and, in answer to my questions, described them as several in number, well-dressed, and good-

looking. At my request he rose up to shake hands with them, and was astonished at finding them elude his grasp, and his hand strike the wall. This, however, convinced him that it was an illusion, and he forthwith took off his coat, but was unwilling to converse longer on the subject. In a few days the ladies vanished from his sight."

Spectral illusions are more frequently induced by fever than by any other cause. Indeed, the premonitory stages of most fevers are accompanied by illusive appearances of one kind or another, such as luminous bodies especially when the eyes are shut, hideous faces, streaks of fire, &c.; and in the advanced stages they are not uncommon. A medical friend has informed me, that when ill of fever in Portugal, he was terribly harassed by the vision of a soldier, whose picture was hanging in the room. Removing the picture failed to dissipate the illusion, which did not disappear till he was conveyed to another apartment. Dr Bostock, while under a febrile attack, was visited by spectral illusions of an unusual kind. The

following are the particulars of his case, as described by himself:—

“I was labouring,” says he, “under a fever, attended with symptoms of general debility, especially of the nervous system, and with a severe pain of the head, which was confined to a small spot situated above the right temple. After having passed a sleepless night, and being reduced to a state of considerable exhaustion, I first perceived figures presenting themselves before me, which I immediately recognised as similar to those described by Nicolai, and upon which, as I was free from delirium, and as they were visible about three days and nights with little intermission, I was able to make my observations. There were two circumstances which appeared to me very remarkable; first, that the spectral appearances always followed the motion of the eyes; and, secondly, that the objects which were the best defined and remained the longest visible, were such as I had no recollection of ever having previously seen. For about twenty-four hours I had constantly before me a human figure, the features and dress of which were as dis-

tinctly visible as that of any real existence, and of which, after an interval of many years, I still retain the most lively impression; yet, neither at the time nor since have I been able to discover any person whom I had previously seen who resembled it.

“During one part of this disease, after the disappearance of this stationary phantom, I had a very singular and amusing imagery presented to me. It appeared as if a number of objects, principally human faces or figures on a small scale, were placed before me, and gradually removed like a succession of medallions. They were all of the same size, and appeared to be all situated at the same distance from the face. After one had been seen for a few minutes, it became fainter, and then another, which was more vivid, seemed to be laid upon it or substituted in its place, which, in its turn, was superseded by a new appearance. During all this succession of scenery, I do not recollect that, in a single instance, I saw any object with which I had been previously acquainted, nor, as far as I am aware, were the representations any of those objects, with which

my mind was the most occupied at other times, presented to me; they appeared to be invariably new creations, or, at least, new combinations, of which I could not trace the original materials."*

The following very curious instance, is not less interesting: the subject of it was a member of the English bar.

"In December, 1823, A. was confined to his bed by inflammation of the chest, and was supposed by his medical attendant to be in considerable danger. One night, while unable to sleep from pain and fever, he saw, sitting on a chair, on the left side of his bed, a female figure which he immediately recognised to be that of a young lady who died about two years before. His first feeling was surprise, and perhaps a little alarm; his second, that he was suffering from delirium. With this impression, he put his head under the bed-clothes, and, after trying in vain to sleep, as a test of the soundness of his mind, he went through a long and complicated process of metaphysical reasoning. He then peeped out and saw the figure

* Bostock's *Physiology*, Vol. iii. p. 204.

in the same situation and position. He had a fire, but would not allow a candle or nurse in the room. A stick was kept by his side to knock for the nurse when he required her attendance. Being too weak to move his body, he endeavoured to touch the figure with the stick, but, on a real object being put upon the chair, the imaginary one disappeared, and was not visible again that night.

“The next day he thought of little but the vision, and expected its return without alarm, and with some pleasure. He was not disappointed. It took the same place as before, and he employed himself in observations. When he shut his eyes or turned his head, he ceased to see the figure; by interposing his hand he could hide part of it; and it was shown, like any mere material substance, by the rays of the fire which fell upon and were reflected from it. As the fire declined it became less perceptible, and as it went out, invisible. A similar appearance took place on several other nights; but it became less perceptible, and its visits less frequent, as the patient recovered from his fever.

“He says the impressions on his mind were always pleasing, as the spectre looked at him with calmness and regard. He never supposed it real; but was unable to account for it on any philosophical principles within his knowledge.

In the autumn of 1825, A.'s health was perfectly restored, and he had been free from any waking vision for nearly eighteen months. Some circumstances occurred which produced in him great mental excitement. One morning he dreamed of the figure, which stood by his side in an angry posture, and asked for a locket which he usually wore. He awoke and saw it at the toilet, with the locket in its hand. He rushed out of bed and it instantly disappeared. During the next six weeks its visits were incessant, and the sensations which they produced were invariably horrible. Some years before he had attended the dissection of a woman in a state of rapid decomposition. Though much disgusted at the time, *the subject* had been long forgotten; but was recalled by the union of its putrescent body with the spectre's features. The visits were not con-

fined to the night, but frequently occurred while several persons were in the same room. They were repeated at intervals during the winter; but he was able to get rid of them by moving or sitting *in an erect position*. Though well, his pulse was hard, and generally from 90 to 100."*

In March, 1829, during an attack of fever, accompanied with violent action in the brain, I experienced illusions of a very peculiar kind. They did not appear except when the eyes were shut or the room perfectly dark; and this was one of the most distressing things connected with my illness; for it obliged me either to keep my eyes open or to admit more light into the chamber than they could well tolerate. I had the consciousness of shining and hideous faces grinning at me in the midst of profound darkness, from which they glared forth in horrid and diabolical relief. They were never stationary, but kept moving in the gloomy back ground: sometimes they approached within an inch or two of my face; at other times,

* Phrenological Journal, Vol. v. p. 210.

they receded several feet or yards from it. They would frequently break into fragments, which after floating about would unite—portions of one face coalescing with those of another, and thus forming still more uncouth and abominable images. The only way I could get rid of those phantoms was by admitting more light into the chamber and opening the eyes, when they instantly vanished; but only to reappear when the room was darkened or the eyes closed. One night, when the fever was at its height, I had a splendid vision of a theatre, in the arena of which Ducrow, the celebrated equestrian was performing. On this occasion I had no consciousness of a dark back ground like to that on which the monstrous images floated; but every thing was gay, bright and beautiful. I was broad awake, my eyes were closed, and yet I saw with perfect distinctness the whole scene going on in the theatre—Ducrow performing his wonders of horsemanship—and the assembled multitude, among whom I recognised several intimate friends; in short, the whole process of the entertainment as clearly as if I were present

at it. When I opened my eyes, the whole scene vanished like the enchanted palace of the necromancer; when I closed them, it as instantly returned. But though I could thus dissipate the spectacle, I found it impossible to get rid of the accompanying music. This was the grand march in the Opera of Aladdin, and was performed by the orchestra with more superb and imposing effect, and with greater loudness, than I ever heard it before: it was executed, indeed, with tremendous energy. This air I tried every effort to dissipate, by forcibly endeavouring to call other tunes to mind, but it was in vain. However completely the vision might be dispelled, the music remained in spite of every effort to banish it. During the whole of this singular state, I was perfectly aware of the illusiveness of my feelings, and, though labouring under violent headach, could not help speculating upon them and endeavouring to trace them to their proper cause. This theatrical vision continued for about five hours; the previous delusions for a couple of days. The whole evidently proceeded from such an excited state of some

parts of the brain, as I have already alluded to. *Ideality, Wonder, Form, Colour and Size*, were all in intensely active operation, while the state of the reflecting organs was unchanged. Had the latter participated in the general excitement, to such an extent as to be unable to rectify the false impressions of the other organs, the case would have been one of pure delirium.

Spectral illusions can only be cured by removing the causes which give rise to them. If they proceed from the state of the stomach, this must be rectified by means of purgatives and alterative medicines. Should plethora induce them, local or general blood-letting and other antiphlogistic means are requisite. If they accompany fever or delirium tremens, their removal will, of course, depend upon that of these diseases. Arising from sleeplessness, they will sometimes be cured by anodynes; and from nervous irritation, by the shower bath and tonics. Where they seem to arise without any apparent cause, our attention should be directed to the state of the bowels, and blood-letting had recourse to.

CHAPTER XVI.

REVERIE.

A STATE of mind somewhat analogous to that which prevails in dreaming, also takes place during reverie. There is the same want of balance in the faculties, which are almost equally ill regulated, and disposed to indulge in similar extravagancies. Reverie proceeds from an unusual quiescence of the brain, and inability of the mind to direct itself strongly to any one point: it is often the prelude of sleep. There is a defect in the *attention*, which, instead of being fixed on one subject, wanders over a thousand, and even on these is feebly and ineffectively directed. We sometimes see this while reading, or, rather, while attempting to read. We get over page after

page, but the ideas take no hold whatever upon us: we are in truth ignorant of what we peruse, and the mind is either an absolute blank, or vaguely addressed to something else. This feeling every person must have occasionally noticed in taking out his watch, looking at it, and replacing it without knowing what the hour was. In like manner he may hear what is said to him without attaching any meaning to the words, which strike his ear, yet communicate no definite idea to the sensorium. Persons in this mood may, from some ludicrous ideas flashing across them, burst into a loud fit of laughter during sermon or at a funeral, and thus get the reputation of being either grossly irreverent or deranged. That kind of reverie in which the mind is nearly divested of all ideas, and approximates closely to the state of sleep, I have sometimes experienced while gazing long and intently upon a river. The thoughts seem to glide away, one by one, upon the surface of the stream, till the mind is emptied of them altogether. In this state we see the glassy volume of the water moving past us, and hear

its murmur, but lose all power of fixing our attention definitively upon any subject; and either fall asleep, or are aroused by some spontaneous reaction of the mind, or by some appeal to the senses sufficiently strong to startle us from our reverie. Grave, monotonous, slowly-repeated sounds—as of a mill, a waterfall, an Eolian harp, or the voice of a dull orator, have the effect of lulling the brain into repose, and giving rise to a pleasing melancholy, and to calmness and inanity of mind. Uniform gentle motions have a tendency to produce a similar state of reverie, which is also very apt to ensue in the midst of perfect silence: hence, in walking alone in the country where there is no sound to distract our meditations, we frequently get into this state. It is also apt to take place when we are seated without books, companions, or amusement of any kind, by the hearth on a winter evening, especially when the fire is beginning to burn out, when the candles are becoming faint from want of topping, and a dim religious light, like that filling a hermit's cell from his solitary lamp, is diffused over the apartment. This is

the situation most favourable for reveries, waking dreams, and all kinds of brown study, abstraction, ennui and hypochondria.

Reverie has been known to arise from the mind sustaining temporary weakness, in consequence of long and excessive application to one subject. It is also, I believe, frequently induced by forcing young people to learn what they dislike. In this case, the mind, finding it impossible to direct itself to the hated task, goes wandering off in another direction, and thus acquires a habit of inattention, which, in extreme cases, may terminate in imbecility. Sometimes reverie arises from peculiarity of temperament, either natural or induced by mental or bodily weakness. The best regulated minds and strongest bodies may, however, and, in fact, often have, occasional attacks; but when the feeling grows into a habit, and is too much indulged in, it is apt to injure the usefulness of the individual, and impair the whole fabric of his understanding. "It is," says Dr Good, "upon the faculty of attention that every other faculty is dependent for its vigour and expansion: without it, the percep-

tion exercises itself in vain ; the memory can lay up no store of ideas ; the judgment draw forth no comparisons ; the imagination must become blighted and barren ; and where there is no attention whatever, the case must necessarily verge upon fatuity." I conceive that persons in whom the organ of *Concentrativeness* is very small, are peculiarly apt to fall into reverie.

The following is a remarkable instance of reverie arising from excessive application:—The subject of it was Mr Spalding, a gentleman well known as an eminent literary character in Germany, and much respected by those who knew him. The case was drawn up by himself, and published in the *Psychological Magazine*.

"I was this morning engaged with a great number of people who followed each other quickly, and to each of whom I was obliged to give my attention. I was also under the necessity of writing much ; but the subjects, which were various and of a trivial and uninteresting nature, had no connexion the one with the other ; my attention, therefore, was

constantly kept on the stretch, and was continually shifting from one subject to another. At last it became necessary that I should write a receipt for some money I had received on account of the poor. I seated myself and wrote the two first words, but in a moment found that I was incapable of proceeding, for I could not recollect the words which belonged to the ideas that were present in my mind. I strained my attention as much as possible, and tried to write one letter slowly after the other, always having an eye to the preceding one, in order to observe whether they had the usual relationship to each other; but I remarked, and said to myself at the time, that the characters I was writing were not those which I wished to write, and yet I could not discover where the fault lay. I therefore desisted, and partly by broken words and syllables, and partly by gesture, I made the person who waited for the receipt understand he should leave me. For about half an hour there reigned a kind of tumultuary disorder in my senses, in which I was incapable of remarking any thing very particular, except that one series of ideas

forced themselves involuntarily on my mind. The trifling nature of these thoughts I was perfectly aware of, and was also conscious that I made several efforts to get rid of them, and supply their place by better ones, which lay at the bottom of my soul. I endeavoured as much as lay in my power, considering the great crowd of confused images which presented themselves to my mind, to recall my principles of religion, of conscience, and of future expectation; these I found equally correct, and fixed as before. There was no deception in my external senses, for I saw and knew every thing around me; but I could not free myself from the strange ideas which existed in my head. I endeavoured to speak in order to discover whether I was capable of saying any thing that was connected; but although I made the greatest efforts of attention, and proceeded with the utmost caution, I perceived that I uniformly spoke other words than those I intended. My soul was at present as little master of the organs of speech, as it had been before of my hand in writing. Thank God, this state did not continue very long, for, in

about half an hour, my head began to grow clearer, the strange and tiresome ideas became less vivid and turbulent, and I could command my own thoughts with less interruption.

“ I now wished to ring for my servant, and desire him to inform my wife to come to me; but I found it still necessary to wait a little longer to exercise myself in the right pronunciation of the few words I had to say: and the first half hour’s conversation I had with her was, on my part, preserved with a slow and anxious circumspection, until at last I gradually found myself as clear and serene as in the beginning of the day. All that now remained was a slight headach. I recollected the receipt I had begun to write, and in which I knew I had blundered; and upon examining it, I observed, to my great astonishment, that instead of the words *fifty dollars, being one half year’s rate*, which I ought to have written, the words were *fifty dollars through the salvation of Bra*—, with a break after it, for the word *Bra* was at the end of a line. I cannot recollect any perception, or business which I had to transact, that could, by means of an ob-

scure influence, have produced this phenomenon."

Reverie, when proceeding, as in this case, from excessive application, will seldom be difficult of cure: the removal of the exciting cause will of itself naturally constitute the remedy. When it arises from such a defect in education as that already mentioned, the cure will be more difficult, although even then it is not always impracticable. In such a case, the person should be strongly directed to those subjects in which he feels most interest, and never be made to study what he has not a positive liking for. Active employment, and gay and pleasant society, may effect much in restoring the intellectual balance. In all cases whatever, he should never be left long alone; as nothing has such a tendency to foster this state of mind as solitude.

CHAPTER XVII.

ABSTRACTION.

ABSTRACTION, or absence of mind, has been confounded with reverie, but it is, in reality, a different intellectual operation; for as in the latter a difficulty is experienced in making the mind bear strongly on any one point, in the former its whole energies are concentrated toward a single focus, and every other circumstance is, for the time, utterly forgotten. Such was the case with Sir Isaac Newton, when, in a fit of absence, he made a tobacco-stopper of the lady's finger, and with Archimedes, who remained unconscious and unmoved during the noise and slaughter of captured Syracuse. Though, in general, abstraction is easily broken by outward impressions, there have been in-

stances where it has been so powerful as to render the individuals labouring under it insensible to pain. Pinel in his *Nosographie Philosophique* speaks of a priest who in a fit of mental absence was unconscious of the pain of burning: and Cardan brought himself into such a state as to be insensible to all external impressions.

Some men are naturally very absent; others acquire this habit from particular pursuits, such as mathematics, and other studies demanding much calculation. Indeed, all studies which require deep thinking, are apt to induce mental absence, in consequence of the sensorial power being drained from the general circumference of the mind, and directed strongly to a certain point. This draining, while it invigorates the organ of the particular faculty towards which the sensorial energy is concentrated, leaves the others in an inanimate state, and incapacitates them from performing their proper functions: hence persons subject to abstraction are apt to commit a thousand ludicrous errors; they are perpetually blundering—committing a multitude of petty, yet

harmless offences against established rules, and for ever getting into scrapes and absurd situations. Nothing is more common than for an absent man to take the hat of another person instead of his own, to give away a guinea for a shilling, to mistake his lodgings, forget invitations, and so forth. When the fit of abstraction is very strong, he neither hears what is said to him, nor sees what is passing around. "While you fancy," says Budgell, in the 77th No. of the *Spectator*, "he is admiring a beautiful woman, it is an even wager that he is solving a proposition in Euclid; and while you may imagine he is reading the *Paris Gazette*, it is far from being impossible that he is pulling down and rebuilding his country house." In some cases the individual requires to be shaken before he can be brought to take notice of any occurrence; and it is often difficult to make him comprehend even the simplest proposition. Abstraction, therefore, bears an analogy to dreaming; inasmuch as, in each of these states, some faculties are active, while others are at rest. In dreaming, however, the organs of the quiescent faculties

are in a much deeper slumber, and less easily roused into activity than in abstraction: hence, in the great majority of cases, abstraction is broken with greater facility than sleep.

It appears, from the observations of the Edinburgh phrenologists, that individuals who have a large development of the organ of *Concentrativeness* are peculiarly liable to fall into a state of abstraction. The effect of such a development is fixity of ideas—the power and tendency to think consecutively and steadily upon one subject. “In conversing with some individuals,” says Mr Combe,* “we find them fall naturally into a connected train of thinking; either dwelling on a subject which interests them, till they have placed it clearly before the mind, or passing naturally and gracefully to a connected topic. Such persons uniformly have this organ large. We meet with others who, in similar circumstances, never pursue one idea for two consecutive seconds, who shift from topic to topic, without regard to natural connexion, and leave no dis-

* System of Phrenology, p. 135.

ting impression on the mind of the listener ; and this happens even with individuals in whom reflection is not deficient ; but this organ (*Concentrativeness*) is, in such persons, uniformly small." A good endowment of the power in question adds very much to the efficiency of the intellect, by enabling its possessor to apply his mind continuously to a particular investigation, unannoyed by the intrusion of foreign and irrelevant ideas. It seems to have been very strong in Sir Isaac Newton, whose liability to abstraction has already been alluded to. "During the two years," says Biot, "which he spent in preparing and developing his immortal work, *Philosophiæ Naturalis Principia Mathematica*, he lived only to calculate and to think. Oftentimes lost in the contemplation of these grand objects, he acted unconsciously ; his thoughts appearing to preserve no connexion with the ordinary affairs of life. It is said, that frequently, on arising in the morning, he would sit down on his bedside, arrested by some new conception, and would remain for hours together engaged in tracing it out, without

dressing himself." "To one who asked him, on some occasion, by what means he had arrived at his discoveries, he replied, 'By always thinking unto them.' And, at another time, he thus expressed his method of proceeding—"I keep the subject constantly before me, and wait till the first dawning opens slowly, by little and little, into a full and clear light.' Again, in a letter to Dr Bentley, he says, 'If I have done the public any service this way, it is due to nothing but industry and patient thought.'" Biot mentions farther, that, "in general, the intensity of thinking was with him so great that it entirely abstracted his attention from other matters, and confined him exclusively to one object. Thus, we see that he never was occupied at the same time with two different scientific investigations."

The instances of abstraction upon record are so numerous that a volume might easily be filled with them. Hogarth, the illustrious painter, affords a good specimen. Having got a new carriage, he went in it to the Mansion-House, for the purpose of paying a visit to the Lord Mayor. On leaving the house he went

out by a different door from that by which he entered, and found that it rained hard. Notwithstanding this, he walked homewards, and reached his own dwelling drenched to the skin. His wife seeing him in this state, asked him how it happened, and what had become of his carriage since he had not returned home in it. The truth was, that he had actually forgotten he had a carriage, or had gone in one at all.

The following case, from the pleasant style in which it is told, will amuse the reader.

“It is a case of one of the most profound and clear-headed philosophical thinkers, and one of the most amiable of men, becoming so completely absorbed in his own reflections, as to lose the perception of external things, and almost that of his own identity and existence. There are few that have paid any attention to the finance of this country, but must have heard of Dr Robert Hamilton’s ‘Essay on the National Debt,’ which fell upon the Houses of Parliament like a bombshell, or, rather, which rose and illuminated their darkness like an orient sun. There are other writings of his

in which one knows not which most to admire—the profound and accurate science, the beautiful arrangement, or the clear expression. Yet, in public, the man was a shadow; pulled off his hat to his own wife in the streets, and apologized for not having the pleasure of her acquaintance; went to his classes in the college on the dark mornings, with one of her white stockings on the one leg, and one of his own black ones on the other; often spent the whole time of the meeting in moving from the table the hats of the students, which they as constantly returned; sometimes invited them to call on him, and then fined them for coming to insult him. He would run against a cow in the road, turn round, beg her pardon, ‘Madam,’ and hope she was not hurt. At other times, he would run against posts, and chide them for not getting out of his way; and yet his conversation at the same time, if any body happened to be with him, was perfect logic and perfect music. Were it not that there may be a little poetic licence in Aberdeen story-telling, a volume might be filled with anecdotes of this amiable and excellent man,

all tending to prove how wide the distinction is between first-rate thought and that merely animal use of the organs of sense which prevents ungifted mortals from walking into wells. The fish-market at Aberdeen, if still where it used to be, is near the Dee, and has a stream passing through it that falls into that river. The fishwomen expose their wares in large baskets. The Doctor one day marched into that place, where his attention was attracted by a curiously-figured stone in a stack of chimneys. He advanced towards it, till he was interrupted by one of the benches, from which, however, he tumbled one of the baskets into the stream, which was bearing the fish to their native element. The visage of the lady was instantly in lightning, and her voice in thunder; but the object of her wrath was deaf to the loudest sounds, and blind to the most alarming colours. She stamped, gesticulated, scolded, brought a crowd that filled the place; but the philosopher turned not from his eager gaze and his inward meditations on the stone. While the woman's breath held good, she did not seem to heed, but when that began to

fail, and the violence of the act moved not one muscle of the object, her rage felt no bounds: she seized him by the breast, and yelling, in an effort of despair, 'Spagh ta ma, or I'll burst,' sank down among the remnant of her fish in a state of complete exhaustion; and before she had recovered the Doctor's reverie was over, and he had taken his departure."*

Many curious anecdotes of a similar kind are related of the Rev. Dr George Harvest, one of the ministers of Thames Ditton. So confused, on some occasions, were the ideas of this singular man, that he has been known to write a letter to one person, address it to a second, and send it to a third. He was once on the eve of being married to the bishop's daughter, when, having gone a gudgeon-fishing, he forgot the circumstance, and overstaid the canonical hour, which so offended the lady, that she indignantly broke off the match. If a beggar happened to take off his hat to him on the streets, in hopes of receiving alms, he would make him a bow, tell him he was his most humble servant, and walk on. He has

* "New Monthly Magazine," Vol. xxxviii. p. 510.

been known on Sunday to forget the days on which he was to officiate, and would walk into church with his gun under his arm, to ascertain what the people wanted there. Once, when he was playing at backgammon, he poured out a glass of wine, and it being his turn to throw, having the box in one hand and the glass in the other, and being extremely dry, and unwilling to lose any time, he swallowed down both the dice, and discharged the wine upon the dice-board. "Another time," says the amusing narrative which has been published of his peculiarities, "in one of his absent fits, he mistook his friend's house, and went into another, the door of which happened to stand open; and no servant being in the way, he rambled all over the house, till, coming into a middle room, where there was an old lady ill in bed of a quincy, he stumbled over the night-stool, threw a clothes-horse down, and might not have ended there, had not the affrighted patient made a noise at his intrusion, which brought up the servants, who, finding Dr Harvest in the room, instead of the apothecary that was momentarily expected,

quieted the lady's fears, who by this time was taken with such an immoderate fit of laughter at his confusion, that it broke the quincy in her throat, and she lived many years afterwards to thank Dr Harvest for his unlucky mistake." "His notorious heedlessness was so apparent, that no one would lend him a horse, as he frequently lost his beast from under him, or, at least, from out of his hands, it being his frequent practice to dismount and lead the horse, putting the bridle under his arm, which the horse sometimes shook off, or the intervention of a post occasioned it to fall; sometimes it was taken off by the boys, when the parson was seen drawing his bridle after him; and if any one asked him after the animal, he could not give the least account of it, or how he had lost it." In short, the blunders which he committed were endless, and would be considered incredible, were they not authenticated by incontestible evidence. Yet, notwithstanding all this, Harvest was a man of uncommon abilities, and an excellent scholar.

Bacon, the celebrated sculptor, exhibited, on one occasion, a laughable instance of ab-

sence of mind. "Bacon was remarkably neat in his dress, and, according to the costume of the old school, wore, in fine weather, a powdered wig, ruffles, silver buckles, with silk stockings, &c., and walked with his gold-headed cane. Thus attired, he one day called at St Paul's, shortly after having erected the statue of the benevolent Howard, and before the boarding which enclosed the statue had been removed. One of his sons was employed, at this time, in finishing the statue. After remaining a short time, he complained of feeling somewhat cold, on which the son proposed, as no one could overlook them, that he should put on, as a kind of temporary spencer, an old, torn, green shag waistcoat, with a red stuff back, which had been left there by one of the workmen. He said it was a 'good thought,' and accordingly buttoned the waistcoat over his handsome new coat. Shortly afterwards, he was missing, but returned in about an hour, stating that he had been to call on a gentleman in Doctor's Commons, and had sat chatting with his wife and daughters, whom he had never seen before; that he found them to be

exceedingly pleasant women, though perhaps a little disposed to laugh and titter about he knew not what. ‘Sir,’ said the son, ‘I am afraid I can explain their mysterious behaviour; surely you have not kept on that waistcoat all the time?’ ‘But, as sure as I am a living man, I have,’ said he laughing heartily, ‘and I can now account not only for the strange behaviour of the ladies, but for all the jokes that have been cracked about me as I walked along the street—some crying, Let him alone, he does it for a wager, &c., &c.; all which, from being quite unconscious of my appearance, I thought was levelled at some other quiz that might be following near me; and I now recollect that, whenever I looked round for the object of their pleasantry, the people laughed, and the more so, as, by the merry force of sympathy, I laughed also, although I could not comprehend what it all meant.’”

I shall conclude by mentioning an anecdote of Mr Warton, the accomplished Professor of Poetry in the University of Oxford. “This good divine, having dined with some jolly company at a gentleman’s house in that city,

passing through the streets to the church, it being summer-time, his ears were loudly saluted with the cry of 'Live mackerel!' This so much dwelt upon the Doctor's mind, that after a nap while the psalm was performing, as soon as the organ ceased playing, he got up to the pulpit, and, with eyes half open, cried out, 'All alive, alive oh!' thus inadvertently keeping up the reputation of a Latin proverb, which is translated in the following lines:—

'Great wits to madness nearly are allied,
And thin partitions do their bounds divide.'

"The Professor of Poetry perhaps supposed himself yet with his companions at the convivial table."

Mental absence is generally incurable. In stout subjects, depletion, purging, and low diet, will sometimes be of use. Where the affection seems to arise from torpor of the nervous system, blistering the head and internal stimuli afford the most probable means of relief. The person should associate as much as possible with noisy, bustling people, and shun solitude and all such studies as have a tendency to produce abstraction.

CHAPTER XVIII.

SLEEP OF PLANTS.

DURING night, plants seem to exist in a state analogous to sleep. At this period they get relaxed, while their leaves droop and become folded together. Such is peculiarly the case with the tamarind tree, and the leguminous plants with pinnated leaves; but with almost all plants it takes place in a greater or lesser degree, although in some the change is much more striking than in others. The trefoil, the *Oxalis* and other herbs with ternate leaves, sleep with their leaflets folded together in the erect posture. The cause of the different states in which plants exist during the day and night has never been correctly ascertained—some attributing it to the influence of light,

some to the vicissitudes of temperature, and others to atmospherical humidity. Probably the whole of these influences are concerned. It is very evident that the presence of certain stimuli during the day puts the leaves in a state of activity, and excites their development; while the want of such stimuli in the night time throws them into repose, relaxes them, and occasions them to be weighed down, as if the sustaining principle which kept them in energy was suspended in the torpor of sleep. The principal of these stimuli is unquestionably light; indeed, Linnæus, from the observation of stove plants, seems to have demonstrated that it is the withdrawing of light, and not of heat, which produces the relaxation or *Sleep of Plants*, as it is commonly denominated. The effect of light upon the leaves of the *Acacia* is peculiarly striking. At sunrise they spread themselves out horizontally; as the heat increases they become elevated, and at noon shoot vertically upwards; but as soon as the sun declines they get languid and droop, and during night are quite pendent and relaxed. During day, the leaves of most plants are

spread out and displayed, and, at the same time, inclined towards the sun. Those of the *Helianthus annuus*, the *Helianthemum annuum*, and *Croton tinctorium* follow the course of the sun in their position; and most buds and flowers have a tendency to turn their heads in the direction of the great luminary of day. As an instance of this, let us look at the sun-flower, which confronts the source of light with its broad yellow expansion of aspect, and hangs its gorgeous head droopingly so soon as the object of its worship declines. The leaves of a great number of vegetables present changes in their position corresponding to the different hours of the day. "Who does not know," says Willdenow, "that the species of *Lupinus*, especially *Lupinus luteus*, turn, in the open air, their leaves and stalks towards the sun, and follow its course in so steady a manner, as to enable us to specify the hour of the day from their direction." Such phenomena were not unknown to Pliny and Theophrastus.

The analogy between animal and vegetable life is still further demonstrated by the well-

known fact, that while some creatures, such as the cat and owl, sleep during the day, and continue awake at night, certain plants do the same thing. Such is the case with the *Tragopogon luteum* which becomes closed, or, in other words, goes to sleep at nine in the morning, and opens at night. Every hour of the day, indeed, has some particular plant which then shuts itself up: hence the idea of the Flower Dial by means of which the hour of the day can be told with tolerable accuracy. Some plants, which shut themselves up in the day-time, flower at night. The night-flowering *Cereus*, a species of Cactus, is a beautiful instance of the kind; and there are other plants which exhibit the same interesting phenomenon. Nothing, indeed, can be more beautiful than the nocturnal flowering of certain members of the vegetable world. Linæus used to go out at night with a lantern into his garden to have an opportunity of witnessing this remarkable peculiarity in the plants by which it is exhibited.

The analogy between the two kingdoms is rendered yet more striking, when it is recol-

lected that, (with such exceptions as the above,) plants increase much more rapidly during night, which is their time of sleep, than in the day-time, which may be considered the period of their active or waking existence.

The state in which plants exist in the winter season, resembles the hybernation of animals: there is the same torpor and apparent extinction of vitality. Heat and light have the power of both reviving plants and putting an end to hybernation. Between plants and animals, however, there is this difference: that while *most* plants become torpid in winter, only a *small number* of animals get into that state; but even in such dissimilitude we can trace an analogy; for as there are animals upon which winter has no torpifying influence, so are there likewise plants. The *Helleborus hyemalis*, or Christmas rose, flowers at the end of December, and the *Galanthus nivalis*, or snow-drop, in the months of January or February.

CHAPTER XIX.

GENERAL MANAGEMENT OF SLEEP.

IN the foregoing pages, I have detailed at length all the principal phenomena of sleep; and it now only remains to state such circumstances as affect the comfort and healthfulness of the individual while in that condition. The first I shall mention is the nature of the chamber in which we sleep: this should be always large and airy. In modern houses, these requisites are too much overlooked; and, while the public rooms are of great dimensions, those appropriated for sleeping are little better than closets. This error is exceedingly detrimental to health. The apartments wherein so great a portion of life is passed, should always be roomy, and, if possible, not

placed upon the ground-floor, because such a situation is more apt to be damp and ill ventilated than higher up.

The next consideration applies to the bed itself, which ought to be large, and not placed close to the wall, but at some distance from it, both to avoid any dampness which may exist in the wall, and admit a freer circulation of air. The curtains should never be drawn closely together, even in the coldest weather; and when the season is not severe, it is a good plan to remove them altogether. The bed, or mattress, ought to be rather hard. Nothing is more injurious to health than soft beds; they effeminate the individual, render his flesh soft and flabby, and incapacitate him for undergoing any privation. The texture of which the couch is made, is not of much consequence, provided it is not too soft: hence, feather-beds, or mattresses of hair or straw are almost equally good, if suitable in this particular. I may mention, however, that the hair mattress, from being cooler, and less apt to imbibe moisture, is preferable, during the summer season, to a bed of feathers. Those

soft yielding feather-beds, in which the body sinks deeply, are highly improper, from the unnatural heat and perspiration which they are sure to induce. Air-beds have been lately recommended, but I can assert, from personal experience, that they are the worst that can possibly be employed. They become very soon heated to such an unpleasant degree as to render it impossible to repose upon them with any comfort. For bed-ridden persons, whose skin has become irritated by long lying, the hydrostatic bed, lately brought into use in some of the public hospitals, is the best.

The pillow as well as the bed, should be pretty hard. When very soft, the head soon sinks in it, and becomes unpleasantly heated. The objection made to air-beds applies with equal force to air-pillows, which I several times attempted to use, but was compelled to abandon, owing to the disagreeable heat that was generated in a few minutes.

With regard to the covering, there can be no doubt that it is more wholesome to lie between sheets than blankets. For the same reason, people should avoid sleeping in flannel night-

shirts. Such a degree of warmth as is communicated by those means is only justifiable in infancy and childhood, or when there is actual disease or weakness of constitution. Parents often commit a great error in bringing up their young people under so effeminate a system.

A common custom prevails, of warming the bed before going to sleep. This enervating practice should be abandoned except with delicate people, or when the cold is very intense. It is far better to let the bed be chafed by the natural heat of the body, which, even in severe weather, will be sufficient for the purpose, provided the clothing is abundant. A little dancing in the evening is an excellent mode of making the body warm before going to bed, and might be had recourse to with advantage in the winter season.

We ought never to sleep over-loaded with clothes, but have merely what is sufficient to maintain a comfortable warmth.

When a person is in health, the atmosphere of his apartment should be cool; on this account, fires are exceedingly hurtful, and should

never be had recourse to, except when the individual is delicate, or the weather intolerably severe. When they become requisite smoke must be carefully guarded against, as fatal accidents have arisen from this cause.

The window shutters ought never to be entirely closed, neither ought they to be kept altogether open. In the first case, we are apt to oversleep ourselves, owing to the prevailing darkness with which we are surrounded; and in the second, the light which fills the apartment, especially if it be in the summer season, may disturb our repose, and waken us at an earlier hour than there is any occasion for. Under both circumstances, the eyes are liable to suffer; the darkness, in the one instance, disposes them to be painfully affected, on exposure to the brilliant light of day, besides directly debilitating them—for, in remaining too much in the gloom, whether we be asleep or awake, these organs are sure to be more or less weakened. In the other case, the fierce glare of the morning sun acting upon them, perhaps for several hours before we get up, does equal injury, making them

tender and easily affected by the light. The extremes of too much and too little light must, therefore, be avoided, and such a moderate portion admitted into the chamber as not to hurt the eyes, or act as too strong a stimulus in breaking our slumbers.

During the summer heats, the covering requires to be diminished, so as to suit the atmospheric temperature; and a small portion of the window drawn down from the top, to promote a circulation of air; but this must be done cautiously, and the current prevented from coming directly upon the sleeper, as it might give rise to colds, and other bad consequences. The late Dr Gregory was in the habit of sleeping with the window drawn slightly down during the whole year; and there can be no doubt that a gentle current pervading our sleeping apartments, is in the highest degree essential to health.

Nothing is so injurious as damp beds. It becomes every person, whether at home or abroad, to look to this matter, and see that the bedding on which he lies is thoroughly dry, and free from even the slightest moisture.

By neglecting such a precaution, rheumatism, colds, inflammations, and death itself may ensue. Indeed, these calamities are very frequently traced to sleeping incautiously upon damp beds. For the same reason, the walls and floor should be dry, and wet clothes never hung up in the room.

We should avoid sleeping in a bed that has been occupied by the sick, till the bedding has been cleansed and thoroughly aired. When a person has died of any infectious disease, not only the clothes in which he lay, but the couch itself ought to be burned. Even the bed-stead should be carefully washed and fumigated.

Delicate persons who have been accustomed to sleep upon feather-beds must be cautious not to exchange them rashly for any other.

On going to sleep, all sorts of restraints must be removed from the body; the collar of the night-shirt should be unbuttoned, and the neckcloth taken off. With regard to the head, the more lightly it is covered the better: on this account, we should wear a thin cotton or silk night-cap; and this is still better if made

of net-work. Some persons wear worsted, or flannel caps, but these are never proper, except in old or rheumatic subjects. The grand rule of health is to keep the head cool, and the feet warm; hence, the night-cap cannot be too thin. In fact, the chief use of this piece of clothing is to preserve the hair, and prevent it from being disordered and matted together.

Sleeping in stockings is a bad and uncleanly habit. By accustoming ourselves to do without any covering upon the feet, we shall seldom experience cold in these parts, if we have clothing enough to keep the rest of the system comfortable; and should they still remain cold, this can easily be obviated, by wrapping a warm flannel-cloth around them, or by applying to them, for a few minutes, a heated iron, or a bottle of warm water.

The posture of the body must be attended to. The head should be tolerably elevated, especially in plethoric subjects; and the position, from the neck downwards, as nearly as possible horizontal. The half-sitting posture, with the shoulders considerably raised is injurious, as the thoracic and abdominal viscera

are thereby compressed, and respiration, digestion, and circulation materially impeded. Lying upon the back is also improper, in consequence of its tendency to produce night-mare. Most people pass the greater part of the night upon the side, which is certainly the most comfortable position that can be assumed in sleep. According to Dr A. Hunter, women who love their husbands generally lie upon the right side. This interesting point I have no means of ascertaining, although, doubtless, the ladies are qualified to speak decidedly upon the subject. I have known individuals who could not sleep except upon the back; but these are rare cases.

I have mentioned the necessity of a free circulation of air. On this account, it is more wholesome to sleep single than double, for there is then less destruction of oxygen; and the atmosphere is much purer and cooler. For the same reason, the practice, so common in public schools, of having several beds in one room, and two or three individuals in each bed, must be deleterious. When more than one sleep in a single bed, they should take care

to place themselves in such a position as not to breathe in each other's faces. Some persons have a dangerous custom of covering their heads with the bed-clothes. The absurdity of this practice needs no comment.

Before going to bed, the body should be brought into that state which gives us the surest chance of dropping speedily asleep. If too hot, its temperature ought to be reduced by cooling drinks, exposure to the open air, sponging, or even the cold bath; if too cold, it must be brought into a comfortable state by warmth; for both cold and heat act as stimuli, and their removal is necessary before slumber can ensue. A full stomach, also, though it sometimes promotes, generally prevents sleep; consequently, supper ought to be dispensed with, except by those who having been long used to this meal, cannot sleep without it. As a general rule, the person who eats nothing for two or three hours before going to rest, will sleep better than he who does. His sleep will also be more refreshing, and his sensations upon awaking much more gratifying. The Chinese recommend brush-

ing the teeth previous to lying down: this is a good custom.

Sleeping after dinner is pernicious. On awaking from such indulgence, there is generally some degree of febrile excitement, in consequence of the latter stages of digestion being hurried on: it is only useful in old people, and in some cases of disease.

The weak, and those recovering from protracted illnesses, must be indulged with more sleep than such as are vigorous. Sleep, in them, supplies, in some measure, the place of nourishment, and thus becomes a most powerful auxilliary for restoring them to health. Much repose is likewise necessary to enable the system to recover from the effects of dissipation.

Too little and too much sleep are equally injurious. Excessive wakefulness, according to Hippocrates, prevents the aliment from being digested, and generates crude humours. Too much sleep produces lassitude and corpulency, and utterly debases and stupifies the mind. Corpulent people being apt to indulge in excessive sleep, they should break this

habit at once, as, in their case, it is peculiarly unwholesome. They ought to sleep little, and that little upon hard beds.

The practice of sleeping in the open air, cannot be too strongly reprobated. It is at all times dangerous, especially when carried into effect under a burning sun, or amid the damps of night. In tropical climates, where this custom is indulged in during the day, it is not unusual for the person to be struck with a *coup-de-soleil*, or some violent fever; and, in our own country, nothing is more common than inflammations, rheumatisms, and dangerous colds, originating from sleeping upon the ground, either during the heat of the day, or when the evening has set in with its attendant dews and vapours.

As respects the repose of children it may be remarked that the custom of rocking them asleep in the cradle, is not to be recommended, sanctioned though it be by the voice of ages. This method of procuring slumber, not only heats the infant unnecessarily, but, in some cases, disorders the digestive organs, and, in most, produces a sort of artificial sleep, far

less conducive to health, than that brought on by more natural means. According to some writers, it has also a tendency to induce water in the head, a circumstance which I think possible, although I never knew a case of that disease which could be traced to such a source. The cradle, then, should be abandoned, so far as the rocking is concerned, and the child simply lulled to repose in the nurse's arms, and then deposited quietly in bed. Sleep will often be induced by gently scratching or rubbing the top of the child's head. This fact is well known to some nurses, by whom the practice is had recourse to for the purpose of provoking slumber in restless children. For the first month of their existence, children sleep almost continually, and they should be permitted to do so, for at this early age they cannot slumber too much: calm and long-continued sleep is a favourable symptom, and ought to be cherished rather than prevented, during the whole period of infancy. When, however, a child attains the age of three or four months, we should endeavour to manage so that its periods of wakefulness may occur

in the day-time, instead of at night. By proper care, a child may be made to sleep at almost any hour; and, as this is always an object of importance, it should be sedulously attended to in the rearing of children. Until about the third year, they require a little sleep in the middle of the day, and pass half their time in sleep. Every succeeding year, till they attain the age of seven, the period allotted to repose should be shortened one hour, so that a child of that age may pass nine hours, or thereabouts, out of the twenty-four, in a state of sleep. Children should never be awakened suddenly, or with a noise, in consequence of the terror and starting which such a method of arousing them produces: neither should they be brought all at once from a dark room into a strong glare of light, lest their eyes be weakened, and permanent injury inflicted upon these organs.

The position in which children sleep requires to be carefully attended to. Sir Charles Bell mentions that the *eneuresis infantum*, with which they are so often affected, frequently arises from lying upon the back, and that it

will be removed or prevented by accustoming them to lie on the side. It is also of the greatest importance that they be kept sufficiently warm. I believe that many infantile diseases arise from the neglect of this precaution. Children have little power of evolving heat; on this account, when delicate, they should never be permitted to sleep alone, but made to lie with the nurse, that they may receive warmth from her body.

At whatever period we go to sleep, one fact is certain, that we can never with impunity convert day into night. Even in the most scorching seasons of the year, it is better to travel under the burning sunshine, than in the cool of the evening, when the dews are falling and the air is damp. A case in support of this statement, is given by Valangin in his work on Diet. Two Colonels in the French army had a dispute whether it was most safe to march in the heat of the day, or in the evening. To ascertain this point, they got permission from the commanding officer to put their respective plans into execution. Accordingly, the one with his division marched

during the day, although it was in the heat of summer, and rested all night—the other slept in the day-time, and marched during the evening and part of the night. The result was, that the first performed a journey of six hundred miles, without losing a single man or horse, while the latter lost most of his horses, and several of his men.

It now becomes a question at what hour we should retire to rest, how long our rest ought to continue, and when it should be broken in the morning. These points I shall briefly discuss, in the order in which they stand.

It is not very easy to ascertain the most appropriate hour for going to bed, as this depends very much upon the habits and occupation of the individual. Labourers and all hard-wrought people, who are obliged to get up betimes, require to go to rest early; and, in their case, nine o'clock may be the best hour. Those who are not obliged to rise early, may delay the period of retiring to rest for an hour or two longer; and may thus go to bed at ten or eleven. These are the usual periods allotted among the middle ranks of life for this purpose;

and it may be laid down as a rule, that to make a custom of remaining up for a later period than eleven, must be prejudicial. Those, therefore, who habitually delay going to bed till twelve, or one, or two, are acting in direct opposition to the laws of health, in so far as they are compelled to pass in sleep a portion of the ensuing day, which ought to be appropriated to wakefulness and exertion. Late hours are in every respect hurtful, whether they be employed in study or amusement. A fresh supply of stimulus is thrown upon the mind, which prevents it from sinking into slumber at the proper period, and restlessness, dreaming, and disturbed repose inevitably ensue. Among other things, the eyes are injured, those organs suffering much more from the candle-light, to which they are necessarily exposed than from the natural light of day.

With regard to the necessary quantity of sleep, so much depends upon age, constitution, and employment, that it is impossible to lay down any fixed rule which will apply to all cases. Jeremy Taylor states that three hours only in the twenty-four should be devoted to

sleep. Baxter extends the period to four hours, Wesley to six, Lord Coke and Sir William Jones to seven, and Sir John Sinclair to eight. With the latter I am disposed to coincide. Taking the average of mankind, we shall come as nearly as possible to the truth when we say that nearly one-third part of life ought to be spent in sleep: in some cases, even more may be necessary, and in few can a much smaller portion be safely dispensed with. When a person is young, strong, and healthy, an hour or two less may be sufficient; but childhood and extreme old age require a still greater portion. No person who passes only eight hours in bed, can be said to waste his time in sleep. If, however, he exceeds this, and is, at the same time, in possession of vigour and youth, he lays himself open to the charge of slumbering away those hours which should be devoted to some other purpose. According to Georget, women should sleep a couple of hours longer than men. For the former he allows six or seven hours, for the latter eight or nine. I doubt, however, if the female constitution, generally speaking, requires more sleep than

the male; at least it is certain that women endure protracted wakefulness better than men, but whether this may result from custom is a question worthy of being considered.

Barry, in his work on Digestion, has made an ingenious, but somewhat whimsical, calculation on the tendency of sleep to prolong life. He asserts, that the duration of human life may be ascertained by the number of pulsations which the individual is able to perform. Thus, if a man's life extends to 70 years, and his heart throbs 60 times each minute, the whole number of its pulsations will amount to 2,207,520,000; but if, by intemperance, or any other cause, he raises the pulse to 75 in the minute, the same number of pulsations would be completed in 56 years, and the duration of life abbreviated 14 years. Arguing from these data, he alleges, that sleep has a tendency to prolong life, as, during its continuance, the pulsations are less numerous than in the waking state. There is a sort of theoretical truth in this statement, but it is liable to be modified by so many circumstances, that its application can never become general.

If this were not the case, it would be natural to infer that the length of a man's life would correspond with that of his slumbers; whereas it is well known, that too much sleep debilitates the frame, and lays the foundation of various diseases, which tend to shorten rather than extend the duration of life.

Those who indulge most in sleep, generally require the least of it. Such are the wealthy and luxurious, who pass nearly the half of their existence in slumber, while the hard-working peasant and mechanic, who would seem, at first sight, to require more than any other class of society, are contented with seven or eight hours of repose—a period brief in proportion to that expended by them in toil, yet sufficiently long for the wants of nature, as is proved by the strength and health, which they almost uniformly enjoy.

For reasons already stated, more sleep is requisite in winter than in summer. Were there even no constitutional causes for this difference, we should be disposed to sleep longer in the one than in the other, as some of the circumstances which induce us to sit up

late and rise early in summer, are wanting during winter; and we consequently feel disposed to lie longer in bed during the latter season of the year.

The hour of getting up in the morning is not of less importance than that at which we ought to lie down at night. There can be no doubt that one of the most admirable conduces to health is early rising. "Let us," says Solomon, "go forth into the fields; let us lodge in the villages; let us *get up early* to the vineyards; let us see if the vine flourish—if the tender grape appear—if the pomegranates bud forth."

Almost all men who have distinguished themselves in science, literature, and the arts, have been early risers. The industrious, the active-minded, the enthusiast in the pursuit of knowledge or gain, are up betimes at their respective occupations; while the sluggard wastes the most beautiful period of life in pernicious slumber. Homer, Virgil, and Horace are all represented as early risers: the same was the case with Paley, Franklin, Priestley, Parkhurst, and Buffon, the last of

whom ordered his *valet-de-chambre* to awaken him every morning, and compel him to get up by force if he evinced any reluctance: for this service the valet was rewarded with a crown each day, which recompense he forfeited if he did not oblige his master to get out of bed before the clock struck six. Bishops Jewel and Burnet rose regularly every morning at four o'clock. Sir Thomas More did the same thing; and so convinced was he of the beneficial effects of getting up betimes, that, in his "Utopia," he represented the inhabitants attending lectures before sunrise. Napoleon was an early riser; so were Frederick the Great and Charles XII.; so is the Duke of Wellington; and so, in truth, is almost every one distinguished for energy and indefatigability of mind.

Every circumstance contributes to render early rising advisable to those who are in the enjoyment of health. There is no time equal in beauty and freshness to the morning, when nature has just parted with the gloomy mantle which night had flung over her, and stands before us like a young bride, from whose

aspect the veil which covered her loveliness, has been withdrawn. The whole material world has a vivifying appearance. The husbandman is up at his labour, the forest leaves sparkle with drops of crystal dew, the flowers raise their rejoicing heads towards the sun, the birds pour forth their anthems of gladness; and the wide face of creation itself seems as if awakened and refreshed from a mighty slumber. All these things, however, are hid from the eyes of the sluggard; nature in her most glorious aspect, is, to him, a sealed book; and while every scene around him is full of beauty, interest, and animation, he alone is passionless and uninspired. Behold him stretched upon his couch of rest! In vain does the clock proclaim that the reign of day has commenced! In vain does the morning light stream fiercely in by the chinks of his window, as if to startle him from his repose! He hears not—he sees not, for blindness and deafness rule over him with despotic sway, and lay a deadening spell upon his faculties. And when he does at length awake—far on in the day—from the torpor of this benumbing

sleep, he is not refreshed. He does not start at once into new life—an altered man, with joy in his mind, and vigour in his frame. On the contrary, he is dull, languid, and stupid, as if half recovered from a paroxysm of drunkenness. He yawns, stretches himself, and stalks into the breakfast parlour, to partake in solitude, and without appetite, of his unrefreshing meal—while his eyes are red and gummy, his beard unshorn, his face unwashed, and his clothes disorderly, and ill put on. Uncleanliness and sluggishness generally go hand in hand; for the obtuseness of mind which disposes a man to waste the most precious hours of existence in debasing sleep, will naturally make him neglect his person.

The character of the early riser is the very reverse of the sloven's. His countenance is ruddy, his eye joyous and serene, and his frame full of vigour and activity. His mind, also, is clear and unclouded, and free from that oppressive languor which weighs like a nightmare upon the spirit of the sluggard. The man who rises betimes, is in the fair way of laying in both health and wealth; while he who

dozes away his existence in unnecessary sleep, will acquire neither. — On the contrary, he runs every chance of losing whatever portion of them he may yet be in possession of, and of sinking fast in the grade of society—a bankrupt both in person and in purse.*

The most striking instances of the good effects of early rising, are to be found in our peasantry and farmers, whose hale complexions, good appetites, and vigorous persons, are

* In the will of the late Mr James Seargeant of the borough of Leicester, is the following clause relative to early rising:—“As my nephews are fond of indulging in bed in a morning, and as I wish them to improve their time while they are young, I direct that they shall prove to the satisfaction of my executors, that they have got out of bed in the morning, and either employed themselves in business, or taken exercise in the open air, from 5 o'clock every morning, from the 5th of April to the 10th of October, being three hours each day, and from 7 o'clock in the morning from the 10th of October, to the 5th of April, being two hours every morning for two whole years: this to be done for some two years during the first seven years, to the satisfaction of my executors, who may excuse them in case of illness, but the task must be made up when they are well, and if they will not do this, they shall not receive any share of my property.”

evidences of the benefit derived from this custom, conjoined with labour; while the wan, and unhealthy countenances and enfeebled frames of those who keep late hours, lie long in bed, and pass the night in dissipation, study, or pleasure, are equally conclusive proofs of the pernicious consequences resulting from an opposite practice.

Early rising, therefore, is highly beneficial; but care should be taken not to carry it to excess. It can never be healthful to rise till the sun has been for some time above the horizon; for, until this is the case, there is a dampness in the air which must prove injurious to the constitution, especially when it is not naturally very strong. Owing to this, early rising is injurious to most delicate people; and, in all cases, the heat of the sun should be allowed to have acquired some strength before we think of getting out of doors. No healthy man in the summer, should lie longer in bed than six o'clock. If he does so he loses the most valuable part of the day, and injures his own constitution. The necessary quantity of sleep ought, however, to be

taken; if he cannot get to bed early enough to enjoy sufficient repose consistent with arising at that hour, it is better to remain longer in bed to make up the difference. Persons subject to gout, should always go to sleep early, and rise early. The former mitigates the violence of the evening paroxysm, which is always increased by wakefulness; and the latter lessens the tendency to plethora, which is favoured by long protracted sleep.

It is common in some of the foreign universities to go to bed at eight, and rise at three or four in the morning; and this plan is recommended by Willich in his "Lectures on Diet and Regimen." Sir John Sinclair, in allusion to it, judiciously observes, "I have no doubt of the superior healthiness, in the winter time, of rising by day-light, and using candle-light at the close of the day, than rising by candle-light, and using it some hours before day-light approaches. It remains to be ascertained by which system the eyes are least likely to be affected."

Dr Franklin, in one of his ingenious Essays, has some fine observations on early rising;

and makes an amusing calculation of the saving that might be made in the city of Paris alone, by using the sunshine instead of candles. This saving he estimates at 96,000,000 of livres, or 4,000,000 sterling. This is mentioned in a satirical vein, but probably there is a great deal of truth in the statement. Indeed, if people were to go sooner to bed, and get up earlier, it is inconceivable what sums might be saved; but, according to the absurd custom of polished society, day is, in a great measure converted into night, and the order of things reversed in a manner at once capricious and hurtful.

To conclude. The same law which regulates our desire for food, also governs sleep. As we indulge in sleep to moderation or excess, it becomes a blessing or a curse—in the one case recruiting the energies of nature, and diffusing vigour alike over the mind and frame: in the other, debasing the character of man, stupifying his intellect, enfeebling his body, and rendering him useless alike to others and to himself. The glutton, the drunkard, and the sloven bear the strictest affinity to each

other, both in the violation of nature's laws, and in the consequences thence entailed upon themselves. What in moderation is harmless or beneficial, in excess is a curse; and sleep, carried to the latter extreme, may be pronounced an act of intemperance almost as much as excessive eating or drinking.

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